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# THE ARCHITECTURAL FORUM



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# The ARCHITECTURAL FORUM

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# THE EDITOR'S FORUM

## A. I. A. CODE OF ETHICS

HERE has lately been made public the new Code of Ethics which was adopted not long ago by the American Institute of Architects. The Institute's Committee on Ethics, of which Abram Garfield is Chairman, prepared the code which was made public by Milton B. Medary, Jr. of Philadelphia, President of the Institute. The basic principles of practice by architects are thus summarized:

The profession of architecture calls for men of the highest integrity, business capacity and artistic ability. The architect is entrusted with financial undertakings in which his honesty of purpose must be above suspicion; he acts as professional adviser to his client, and his advice must be absolutely disinterested; he is charged with the exercise of judicial functions as between client and contractors and must act with entire impartiality; he has moral responsibilities to his professional associates and subordinates; finally, he is engaged in a profession which carries with it grave responsibility to the entire public.

These duties and responsibilities cannot be properly discharged unless his motives, conduct and ability are such as to command respect and confidence.

These nine canons of advice make up the code:

The relation of the architect to his client is one depending upon good faith. An architect will explain the conditional character of estimates made before final drawings and specifications are complete, and will not by careless statements mislead a client as to the probable cost of a building. If the architect guarantees an estimate he becomes legally responsible, and he should not make any guarantee which affects in any respect the quality of his advice.

The contractor depends upon the architect to guard his interests as well as those of the client. An architect will condemn workmanship and materials which are not in conformity with the contract documents, but it is also his duty to give every reasonable aid toward a more complete understanding of these documents so that mistakes may be avoided. He will not call upon a contractor to make good oversights and errors made in the contract documents.

An exchange of information between architects and those who supply and handle building materials is encouraged and commended, but the use of the free engineering service which is offered by manufacturers and jobbers of building materials, appliances and equipment is accompanied by an obligation which may become detrimental to the best interest of the owner, and may easily become embarrassing.

The American Institute of Architects has set forth a schedule or guide by which the proper professional charges may be determined. The architect's charges for his professional service shall be

made to the client only, and he will not receive commissions, fees, gifts, favors, or any substantial service from a contractor, or from any interested person other than the client. He will not knowingly compete with a fellow architect on a basis of charges.

An architect in his investments and in his business relations outside of his profession must be free from financial or personal interests which tend to weaken or discredit his standing as an unprejudiced and honest adviser, free to act in his client's best interests.

An architect will not advertise for the purpose of self-laudatory publicity, but publicity of standards, aims and progress of the profession is to be recommended. He will not take part or give any assistance in obtaining advertisements or other support toward meeting the expense of any publication illustrating his work, in behalf of which he may be approached.

An architect may introduce to a possible client the service which he is able to perform, but will not, except under unusual circumstances, offer to continue this service without compensation until it has been approved and definitely accepted by the client.

An architect will not falsely or maliciously injure, directly or indirectly, the professional reputation, prospects or business of a fellow architect. He will not attempt to supplant another architect after definite steps have been taken by a client toward his employment; nor will he undertake a commission for which another has been previously employed until he has determined that the original relation has been fairly terminated and the original architect relieved.

An architect will take no part in a competition which does not include the provisions which experience has found to be necessary if the interests of the owner as well as the architect are to be safeguarded.

The principles were drafted by a committee on which the 57 chapters of the A. I. A. were represented.

## MEETING OF PRODUCERS' COUNCIL

THE Fourth Semi-Annual Meeting of the Producers' Council, affiliated with the American Institute of Architects, will be held at the Detroit-Leeland Hotel, Detroit, on October 19, 20 and 21, 1927.

With the adoption of the report of the Board of Directors of the Institute at the last annual meeting, with reference to the Producers' Council, this organization is now forging ahead rapidly on a constructive program, and it is expected that this meeting will be of much interest, not only to the members of the Council, but to architects in general. A number of prominent architects will address the meetings on points of mutual interest. Members of the Institute are invited to attend the sessions. It is expected that there will be a golf match between architects and producers, which should prove interesting.



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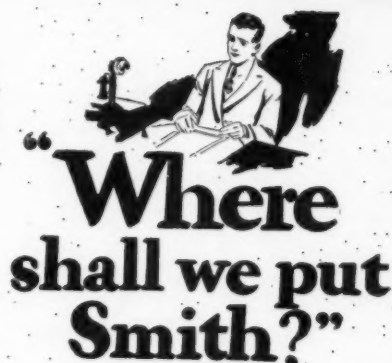
Even if you never moved or altered your office, you would still prefer Telesco. Only Driwood Lumber is used. Every part is cabinet made—and finished to bring out the beauty of the wood. Every detail of line is so correct that Telesco was chosen for one of the most particular buildings in New York—the Architects' Building!

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But even from your own point of view, it is important to choose the most portable partition. This, as you probably know, is Telesco.

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divided without any expense except labor. With Telesco you will avoid misfit sections that stand idle in the store room. You can re-erect Telesco a dozen times or more without damaging the partition in any way.

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very presence of Telesco indicates the character of the building and the attitude of the owner.

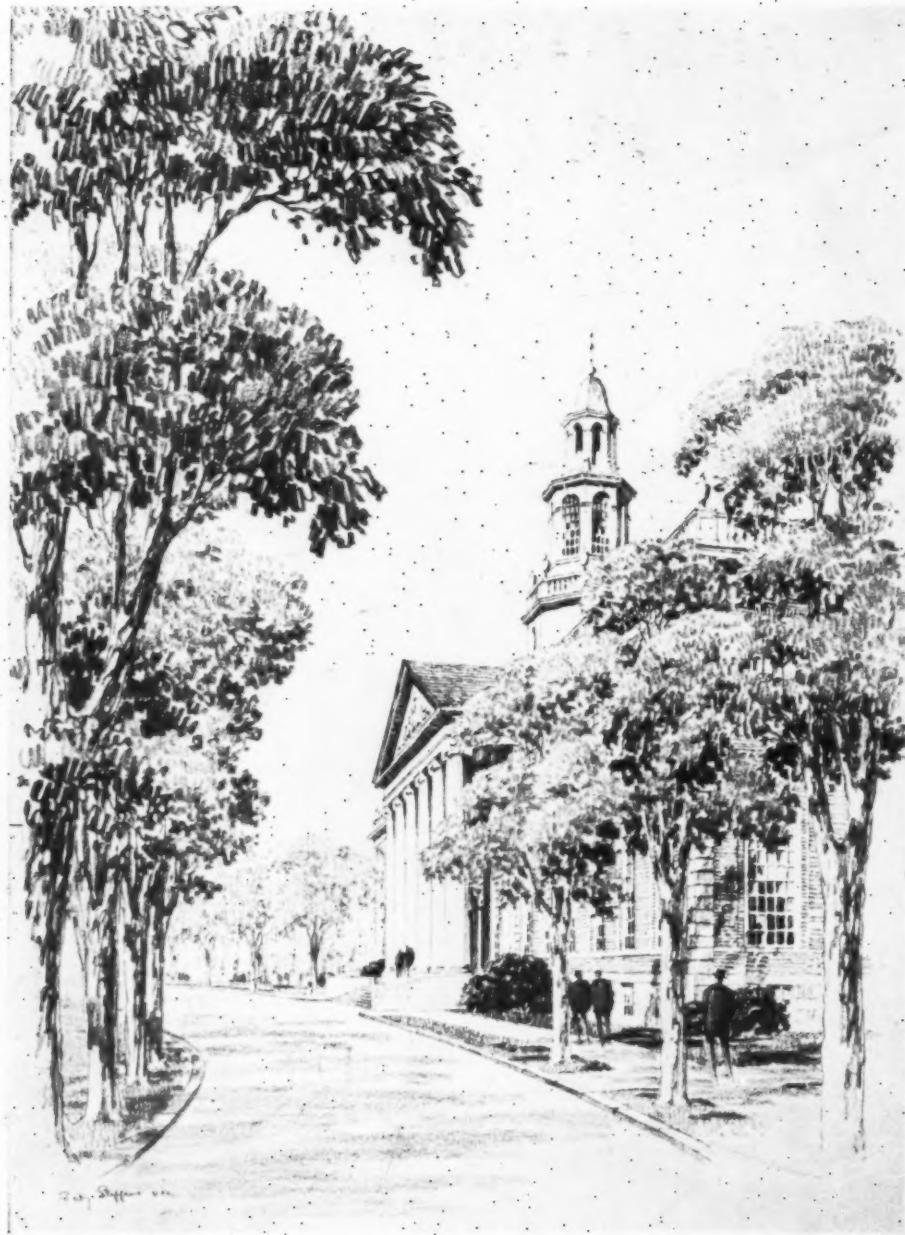
Have you the Telesco Catalog in your files? It contains details of construction, methods of erecting, specifications and full information. We shall be glad to send it free, if you will address our New York office, Dept. A, 9 East 37th Street.

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*Photo. Louis H. Dreyer*

THE LIBRARY, GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
HARVARD UNIVERSITY  
FROM A DRAWING BY FRITZ STEFFINS

*The Architectural Forum*



# The ARCHITECTURAL FORUM

Volume XLVII

OCTOBER 1927

Number 4

## Harvard Graduate School of Business Administration

McKIM, MEAD & WHITE, Architects

By CHARLES W. KILLAM

THE buildings for the Graduate School of Business Administration, Harvard University, were developed in accordance with the definite idea that business men are to take a larger share in that leadership in the community which has been in the past so much in the hands of the learned professions, and that if they are thus to lead, their training must include more than a narrow technical course in some specialty of business. Being a graduate school, its students have had the advantages of cultural courses before entrance, but the School attempts to continue this humanizing process so that its graduates will have a background broader than what is required simply to earn money, that they may know how to enjoy and use money, ability, and power. It was believed that buildings and grounds could and should help in this education, that personality could be developed in an atmosphere of quiet, good taste appropriate to an old university, and that it was important to this end that the School should provide living quarters for all of its unmarried students and for many of its unmarried professors and instructors, so that students might be broadened outside the classroom as well as within by contact with their classmates and with the instructors and younger professors.

The Graduate School had been established in 1908, and had been growing so rapidly in the early 'twenties that its accommodations in scattered rooms of several different buildings had become entirely unsatisfactory, and the growing University needed even these scattered rooms. Nor could the School influence its students in all the ways desired in such quarters. It was difficult to develop a school spirit without a school home. As a first step toward obtaining money for such a home, Dean Donham had studies made to discover, as far as practicable in those early days of the School, what was needed in the way of buildings, so as to be able to show sketch plans of buildings to possible donors and to give some idea of what the cost would be. It is interesting now to look back over the development of the School's ideals as reflected in the sketches which have been made. The first studies, made in 1920, made no provision whatever for dormitories, and arranged all the activities of the School,—classrooms, library, administration,

and business research,—in one building. Later, three buildings were found to be necessary, but still no dormitories were provided for. By the time that gifts were asked, however, the need of dormitories as an important part of the social and cultural equipment of the School had come to be appreciated, and sketches prepared at that time included them as well as six other separate buildings for various purposes.

When gifts were solicited it was not expected that the \$5,000,000 needed would be given by one man, but the University was fortunate enough to receive the entire sum from George F. Baker, of New York. Mr. Baker's gift was accepted, and the words "George F. Baker Foundation" were added to the name of the School. Mr. Baker suggested that an architect should be chosen by competition. Dean Wallace B. Donham of the School arranged with the writer to serve as Professional Adviser, and there was arranged a competition somewhat unusual in that certain details were studied out and issued to the competitors in the program. The method of investigating the qualifications of the competitors was also unusual. In preparation for the competition a fresh examination of the growing needs and ideals of the School led to the inclusion of these specific buildings in the scheme, to be obtained at once, if possible, or else in the future, when more funds would be available,—administration, classrooms, dining hall and clubs, dormitories, library, recreation, business research and professors' houses, all found necessary.

The University owns large areas on the south side of the Charles River, in Boston, divided from the Freshman Dormitories in Cambridge only by the narrow river. Soldiers' Field, containing the stadium and other athletic buildings, is on the western side of North Harvard Street, which divides this Boston portion of the University lands, and the Business School group is on the eastern side, opposite the stadium, and in the area between North Harvard Street and the Charles River Parkway, about one-third of a mile from Harvard Square and the "yard." The land was low and flat, with very few trees which could be saved. The Metropolitan District Commission controls the parkways on both sides of the river, but the portion in front of the area to be used for the



Photo. Air Service of New England, Inc.

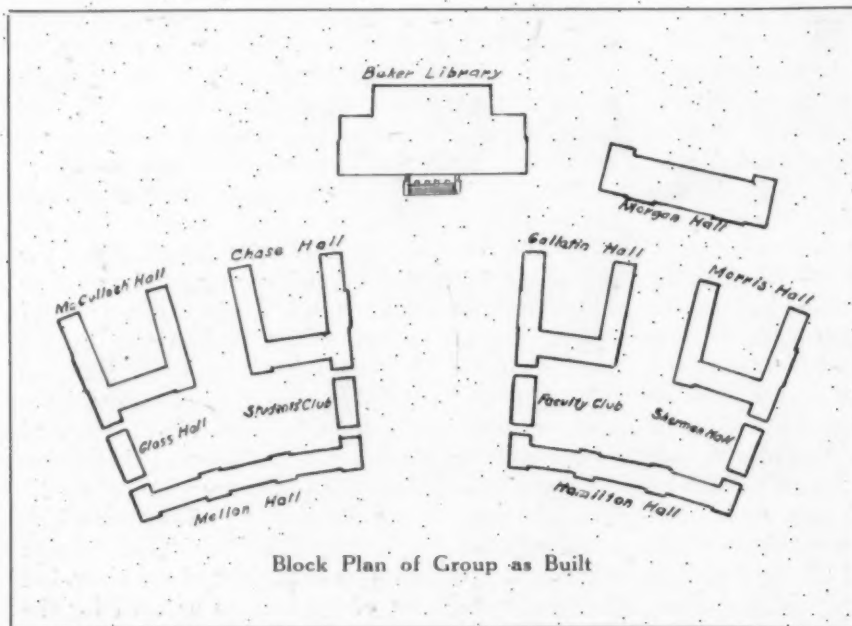
#### Air View, Harvard Graduate School of Business Administration

School had not been developed. The proposed park drive made a short cut across the bend in the river in front of the University land, leaving a wider park between the drive and the river than is provided along the rest of the river front. It was seen that land at this point would be much more useful to the University than to the Commission in the form of an unnecessarily wide park, and that it would be mutually advantageous to have the park drive follow the bank of the river more closely and for the Commission to sell to the University an area of about seven acres thus saved. This was readily arranged.

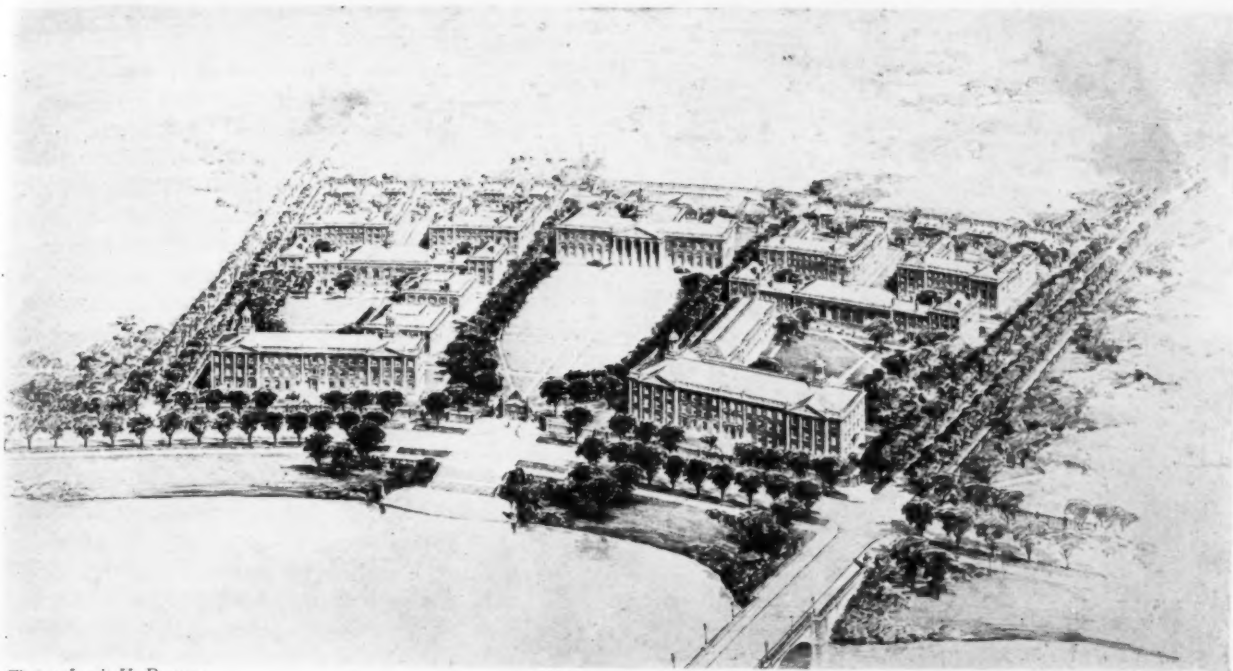
Before issuing the program, the Dean, the Professional Adviser, and a draftsman spent the time

from July 1 to September 13, 1924 in a detailed study of the requirements, and prepared drawings which were issued in the program. They consulted frequently with President Lowell, of Harvard, who takes a very active interest in all building operations of the University. These preliminary drawings were considered helpful, not only to crystallize the ideas of the University authorities but also to simplify the work of the competitors and to give a basis for starting the working drawings. It was appreciated that economical building was necessary, particularly of the dormitories, because it was desirable that they should earn a better return on their cost than is usual with college dormitories without charging the students more

than the normal rates in other buildings in the University. This economical planning was not, however, allowed to reduce the dormitories to repetitions of the cheapest possible unit. Fireplaces were provided in most of the studies, and the buildings were varied enough to give interest. This economy was not regretted. The School authorities believe that young men learning the principles of business in the environment of an old university should live comfortably but without luxury in buildings in good taste, not in archaeological copies of either too formal or too picturesque structures of the past, to be imitated now only by inconvenient plans and expensive





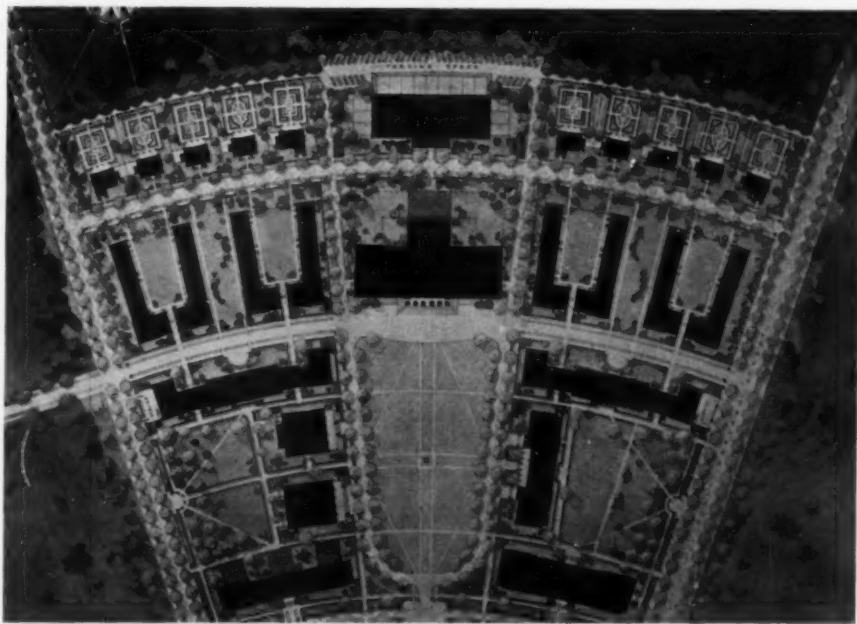


Photos. Louis H. Dreyer

Aërial Perspective, from the Competition Drawing

and unnatural ageing of new materials. The preliminary studies resulted in eight pages of drawings, which were printed in the program. These studies determined the dimensions of most of the buildings, fixed the arrangements of parts of the library, and gave six different unit plans for dormitory rooms, including two-man studies with either one- or two-man bedrooms and with both entry and corridor arrangements. The entry arrangement required less area, and the two-man studies with two-man bedrooms gave the most economical plan studied, occupying 191 square feet per man gross, including walls, stairs, and toilets. Plate 68 shows the plan for this scheme as issued in the program. It is believed to give a minimum area compatible with comfort, but the competitors were given freedom to develop better units if they wished, and of course they had to do so to assemble the units into buildings and to fit angles and ends. This unit is unusual in that each entry serves eight men per floor, and each toilet also serves eight men, but not the same men. Each pair of men in a study, therefore, meet six other men in the toilet and four other men on the stairs, the four latter men using another toilet. This amount of social contact was welcomed as being broader than the four-man contact possible when each entry serves only two two-man studies. The en-

trances to the studies were placed on the side walls as far back from the window walls as possible, so as to give full use of the best lighted parts of the rooms for desks and window seats. This location of the study doors required that the first floor be a half-story above the ground at the entrances, thus giving windows high enough to properly light the basement. Three lavatories are shown on this plan, but it was later decided to install four, and the double shower bath was changed to a single, so that the ratio of fixtures became one shower bath, two water closets and four lavatories to each eight men. These ratios have given satisfaction and have proved adequate during the year the dormitories have been in use.



Block Plan, Portion of Competition Drawing



Chase Hall and Future Instructors' House

The outline scheme of the Library as issued to the competitors is shown on Plate 66. This scheme was based upon the fundamental requirements, laid down by the librarian, Charles C. Eaton, that the delivery desk was to be the center about which stacks, working spaces, and reading rooms should be grouped as closely as possible. There were no requirements for memorial halls, and no desire for monumental treatment was allowed to interfere with this straightforward functioning. North light was preferred for the reading room, and this gave an opportunity to extend the stack spaces to the south, where the University owns ample land. The competitors were allowed by these preliminary studies to concentrate their attention on the grouping as a whole, and their ability to "precise" was judged by their treatment of a combined dining hall and club building with plan at 1/16 and elevation at 1/8 scale. A number of them expressed gratification at the time and labor saved them by the preliminary study which was thus afforded.

A two-stage competition was decided upon. Although the standard form of the American Institute of Architects was followed in general, some unusual

provisions were introduced. The rough draft was very thoroughly examined and revised by counsel of the University. The first stage was open to all architects resident in the United States without preliminary investigation as to their qualifications and without compensation. The important provision was made, however, that such competitors in the first stage as were chosen by the jury as meriting consideration for admission to the final stage should have their qualifications investigated, and should not be admitted to the final stage unless their *business capacities, organizations, and qualifications were of such a high standard as to meet with the unqualified approval of the Treasurer of the University*. More than 200 architects expressed a desire to compete at first, but after consideration of these requirements only 65 arranged to enter the first stage, and only 49 actually sent in drawings. The first-stage competitors were given from September 13 to November 1, 1924. During the first stage the clients referred to by the 65 competitors were asked to write to the Treasurer or the Dean giving their opinions of the qualifications of the architects. This resulted in more than 300 letters from clients, as many as nine replying in the cases of some of the competitors. It was perhaps one of the most thorough investigations ever carried through covering a large number of architects. Many of the clients referred to had employed the architects

under investigation on large operations. There were, of course, a few who criticized the business ability of their architects, but the outstanding and encouraging fact developed by the investigation was that a large number of architects have carried on great building operations in a business-like manner to the entire satisfaction of their clients. The judges for the first stage were Charles Francis Adams, Treasurer of the University; Wallace B. Donham, Dean of the Business School; and Charles D. Maginnis, and Charles A. Platt. The architect-members were nominated by six architects who had been previously chosen to participate in the final stage without being required to enter the first. From the first stage, the jury, on November 11, selected a group which they believed to merit admission to the final stage as far as could be judged from the competitive drawings. This part of the choice was entirely anonymous. From this group the Treasurer, by the help of letters, of references, and of photographs of executed work gathered together during the competition and, of course, without anonymity, selected to enter the final stage in addition to the six originally invited:



Aymar Embury II, New York; Hewitt & Brown, Minneapolis; Raymond M. Hood, New York; Ludlow & Peabody, New York, with Harold Field Kellogg, Boston, Associated; Benjamin W. Morris with Eric Gugler, New York, Associated; Egerton Swartwout, New York. The first stage produced some helpful suggestions which were included in the modifications of the program for the final stage, and it helped toward further crystallizing the ideas of the authorities.

The University authorities had selected these architects to compete in the final stage without participation in the first stage: Coolidge, Shepley, Bulfinch & Abbott, Boston; Professor J. J. Haffner and Perry, Shaw & Hepburn, Boston, Associated; Guy Lowell, Boston; McKim, Mead & White, New York; Parker, Thomas & Rice, Boston; Walker & Gillette, New York. These firms had designed satisfactory buildings for the University, for Harvard Clubs, or for the donor, or had official connection with the School of Architecture of the University. Each unsuccessful competitor in the final stage received \$2,500, and the winner received \$25,000 within ten days as an initial payment on account of his fee.

For the final stage the original program was again used in the main, but with some modifications, and it was issued on November 15, 1924, the competitors being given until January 5, 1925, and the judgment was rendered on January 10. In the first stage competitors had been left free to group the buildings anywhere on the long River Parkway frontage, or on North Harvard Street, or anywhere on the large area available, provided that the area at the junction of the street and parkway was occupied. There were naturally many different solutions under this broad permission. In the final stage the field was limited because many of the first-stage competitors had disregarded the requirement of compactness. Another modification was to change the single large dining hall to two. Later consideration increased this number to six, when the working drawings were started, in the belief that the smaller rooms give an intimacy that is socially desirable as compared with that possible in a hall seating nearly 1000 men. The lack of any obvious center from which to start an axis naturally led to different arrangements. Two chose a diagonal axis from the junction of North Harvard Street and the Parkway; one plan disregarded the curve in the Parkway altogether; two plans presented buildings longwise to the curve; one plan had buildings anglewise to both the curve and North Harvard Street; some, like



Faculty Club and Dormitories

the winner, presented curved facades to the Parkway and facades on North Harvard Street parallel to the street. The winning scheme, by McKim, Mead & White, recognized the existence of the curve in the river by using a fan-shaped plan with a trapezoidal court on a main radial axis running nearly north and south. This court as built is about 375 feet deep, 185 feet wide at the river end, and 250 feet wide at the Library end. The Administration Building was placed nearest the junction, as was required in the program, and faces on the River Parkway as does the Research Building on the other side of the main court. Forming the sides of the court are the classrooms, auditorium, clubs, and some of the dormitories. The Library ends the axis of the main court at the wide end and faces north. The rest of the dormitory buildings are placed on either side of it. The Recreation Building was back of the Library with professors' houses on either side of it, forming the tips of the sticks of the fan toward the south. It was the simplest, most straightforward scheme that was presented, and the only scheme which could be easily recalled to memory. It recognized



Perspective Sketch of Library, Harvard Graduate School of Business Administration

the curve in the river as do the Freshman Dormitories on the opposite bank, although this resulted in an axis based on nothing more important than a boat house and a power house on the Cambridge side of the river. It also resulted in a trapezoidal main court which widens as it extends back from the river and thus neutralizes the perspective effect by apparently shortening the court and moving the Library nearer the river. The dormitories were like two hands of four fingers each, with the openings toward the south, giving favorable lighting. The scheme gave two attractive curved roads, one in front and one at the rear of the Library. It orientated the Library in exactly the right way. It recognized the existence of North Harvard Street sufficiently. It did not open up the whole group to public inspection from the outside, but on the other hand it did have a main court with its narrow end open toward the parkways running on each side of the river in front of the group. The increasingly large number of motorists using these parkways will therefore have a chance to look up this main court and see the Library at its end, and will thus sense the use and importance of the group. The dormitory courts, on the other hand, were, as was desired, small enough and varied enough to give intimacy and privacy, and the fact that the angles were not right angles added a little pleasant informality to the extensive grouping.

The jury for the final stage of the competition consisted of Mr. Baker, the donor; President A. Lawrence Lowell; Louis Ayres; Milton B. Medary, President of the American Institute of Architects; and John Russell Pope, the three latter being chosen from nominees made by the competitors in the final stage. This stage was entirely anonymous. In the judgment the architect-members were asked to give their opinion first, and their choice met with the hearty approval of the lay members. The preparation of the program began July 1, 1924, and the

winner in the final stage was announced on January 10, 1925. The preparations for the competition and the competition itself took, therefore, six months and cost more than \$40,000. The University authorities believe that the time and money spent in preparation for the competition were worth while, and that the University got more nearly what it wanted and required less work of the architects than if the winning architects had been engaged in the beginning. The competition seems to have been justified.

All of the authorities of the University at present are in agreement that a school of about 1000 men is large enough to allow a satisfactory subdivision of its subjects, and that no larger number is desired. In order, however, not to bind their successors to this limit, studies were carried far enough to show that by forming the main court of the winning design with dormitories, instead of with other buildings, it would be possible to provide for a still larger School if it were ever found desirable. This was accomplished by moving the dormitories forward to the Parkway, where two of the halls could overlook the river, and by moving the Administration Building back alongside the Library. This change retained the general scheme of the winning plan except that the dormitories now form the sides of the main court. It allows future additional dormitories to extend around the easterly and northerly sides of the Library and additional classroom and research buildings to extend along North Harvard Street, thus leaving the Library and Administration Building near the center of such a possible development. The plan as built, however, has not been handicapped in any way to provide for this possible growth or for possible change.

There were several reasons for haste in finishing the buildings. It was also hoped to obtain early and cordial cooperation from the contractor, and it was therefore decided to enter into a cost-plus-fixed-fee contract. It was appreciated that this method made





Photos, Paul J. Weber

Library, Harvard Graduate School of Business Administration

it difficult to determine even the approximate cost, because there was no time to await final sketches of all of the buildings. It was felt that some buildings could be omitted from the program if necessary as the costs became known, and that since work could be started more promptly with this form of contract, the buildings could be occupied one academic year earlier, thereby, for one thing, earning about \$100,000 from the dormitory rentals during that period.

As the land was in part a dump, several feet below the desired finished grade, arrangements were at once made with Boston and Cambridge for dumping, as it was not considered feasible to dredge fill from this narrow part of the river as had been done some years before on the area now occupied by the Massachusetts Institute of Technology. Most of the University buildings in Cambridge are heated from a power house of the Boston Elevated Railway on the Cambridge side of the river, directly on the axis of the new group. The problem of heating the University as a whole was reviewed in this connection, for its buildings in Cambridge and in this part of Boston extend for a greatest length of over a mile. It was considered whether the extent of Harvard's holdings in Boston would warrant a separate power house, a part of which should be built for this group and additions made as the University built on the vacant area. It was finally decided to bring the steam from the Boston Elevated Railway power house across the river. The pipes could not be carried on the Anderson Bridge, and a tunnel under the river would be very expensive. From the first the School authorities had hoped to maintain close relations with the rest of the University, and it was soon seen that another bridge, down-river from the Anderson Bridge, would help in this respect. When the matter of piping arose, therefore, it was seen that such a new bridge could carry the pipes and also serve as another desirable physical connection with the under-

graduate portion of the University. It would, of course, be particularly appropriate if it could serve as a memorial to a business man who had conspicuously served his country. Friends and business associates of the late John W. Weeks gave the money for such a bridge, about \$230,000. He was a graduate of Annapolis and had become a successful banker who, in his later years, had served his city, state, and country with distinction as mayor, congressman, and senator. A three-arch foot bridge, 25 feet wide, of concrete faced with brick and limestone, was built somewhat east of the river frontage of the Business School group and gives a second means of approach to Widener Library and the Harvard Union of the main college group. McKim, Mead & White designed the bridge. Its authorization required consent and approval of federal, state, and city authorities. The engineering design and supervision were by the Metropolitan District Commission, in whose care the bridge was placed by successive transfers from the donors to the University, and then to the State of Massachusetts, this the necessary procedure.

On June 2, 1925, the first steam shovel went to work, although working plans were only partly developed at that time. In September and October, 1926, about 16 months later, some 750 students moved into five of the halls. The Library was used in part on March 7, 1927, and the Administration Building in the summer of 1927. Such was the progress made.

As finally built, a dining room was provided in each of the six dormitory halls in order to gain the advantage of the intimacy of a room seating about 100 instead of three times that number. This change complicated the dormitory construction and increased the cost of service, because, while one kitchen was retained, six different serving rooms were required for the students, one for the Faculty Club, one for clerical employees, and one for kitchen employees. There is, in addition, an all-night lunch counter for



the students. The kitchen in the basement of McCulloch Hall, the most easterly of the dormitory units, had to be connected by basement passages or by tunnels under the courts with all of these dining rooms, the farthest, Hamilton and Morris Halls, being about 800 feet away. Mechanical conveyors for the food were investigated and believed to be practicable, but were not installed, although passages and tunnels are built large enough to allow their future installation. All the kitchen service rooms and passages had to be separated from the passages and rooms given up to the housekeeping service, as it has been found impossible to maintain control if there is any connection between them. This complicated the basement plans. Other departures from the competition plans were to provide for the clubs in separate low buildings forming part of the dormitory group, and to substitute houses for unmarried instructors for the professors' houses originally called for. These instructors' houses were inserted as small buildings in the dormitory groups. The houses are completed only to the first floor levels at present in the case of the open ends of McCulloch, Chase, Gallatin, and Morris Halls, the four U-shaped halls, but will be carried up like the

others when the need arises. Connecting arcades are also planned for the future, so that eventually the dormitory courts will be surrounded by arcades one story high, instructors' houses or clubs two and one-half stories high, and the main dormitories three and one-half stories high. The subdivision of the dormitory area into six halls and the provision of an instructors' house with each hall give great flexibility, so that it will be feasible, if ever found desirable, to have an effective tutorial system or some such grouping as that obtaining in the colleges in an English university. Each of the six halls has a two-story dining room, but no common room or lounge. The School authorities felt that the best kind of a lounge for each hall could be provided in the first story of the instructors' house, where the professors and instructors there in residence could easily and informally mingle with the students. In addition to these hall centers, to give a meeting place where the students from each hall can meet students

from all of the other halls, the Students' Club provides not only a common lounge for the whole School but smaller rooms for reading, games, committees, and an all-night lunch counter, since such an adjunct has been found necessary.

A study of the dormitory plans shows that most of the suites consist of two-man studies with two-man bedrooms as worked out for the competition program as most economical. Mellon and Hamilton Halls, the long units on the Parkway, show two-man studies

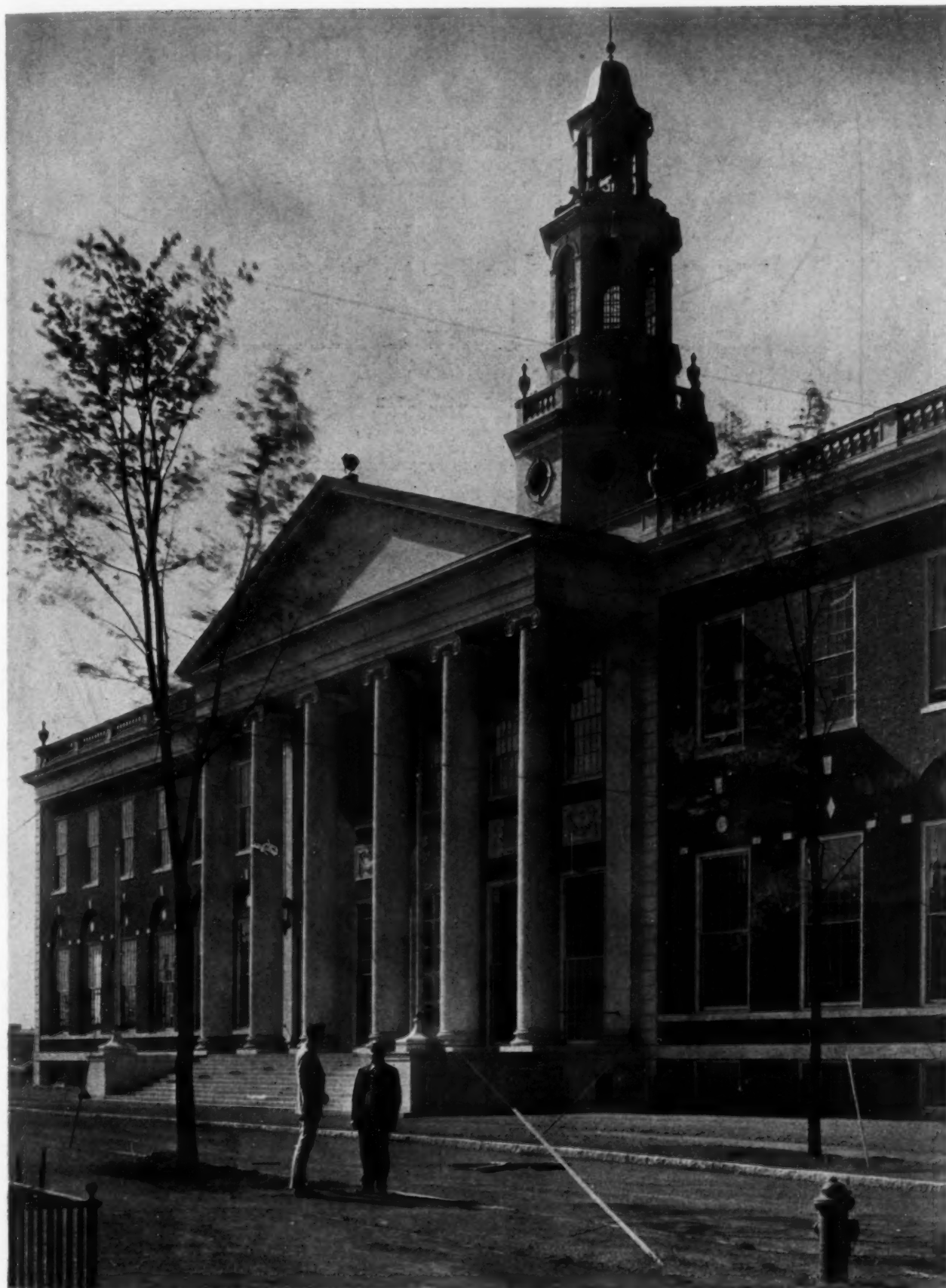
with one-man bedrooms, and the third floor plans of all the units show a corridor scheme, McCulloch, Chase, Gallatin, and Morris Halls having a number of one-man studies with beds. The fourth floor plans were in part in the roof and therefore had to depart from the standard arrangement of the lower floors, thus giving larger and less regular studies, with cross draft in some cases. The splayed walls of some of the dormers add greatly to their attractiveness from the inside. The University supplies the furniture in these dormitories, and each man in a typical two-man study has a desk, desk chair, easy chair, and shares a table and coat standard, and in the bedroom has a bed, pillow, mattress, chifonier, and chair. The



Arch Joining Halls

total cost of this equipment was about \$100 per man. Bookcases and window seats are built in, and each student has a separate closet, although small and too shallow, being only 12 inches deep. The slop sink closet opening into each entry is just the size of the sink, the latter being plastered in. All floors are made as small as possible, those to studies being 32 inches, bedrooms 28 inches, and bathrooms 26 inches wide. The erection of the Recreation Building was postponed. The original program provided for a few classrooms in the Library and the remainder in a separate building, but all of them were finally put into the Library. Their use so far convinces the School authorities that it is desirable to keep them all in the Library building, extending the structure as additional stacks, reading rooms, and classrooms are found necessary. The combination gives compactness and saves the time of students, because they can conveniently use the library between classes, since they do not have to leave the building.

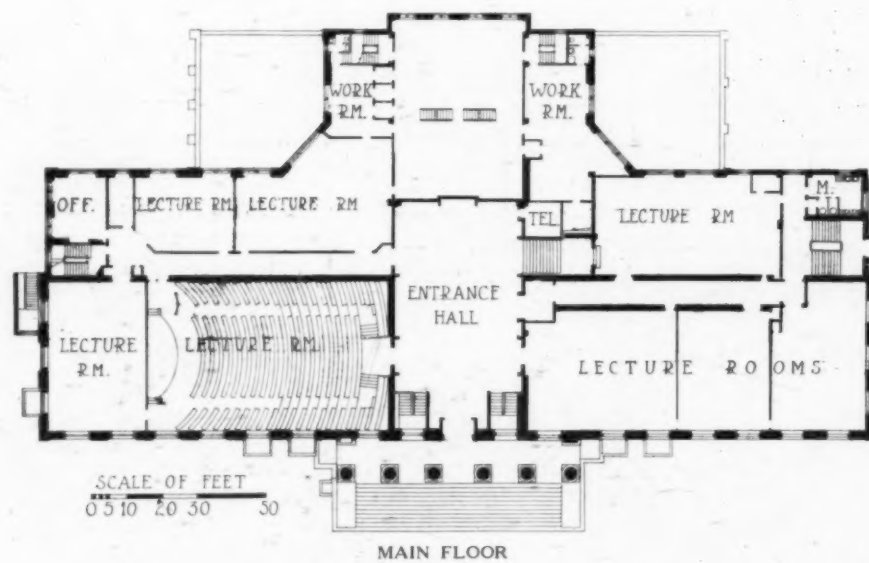
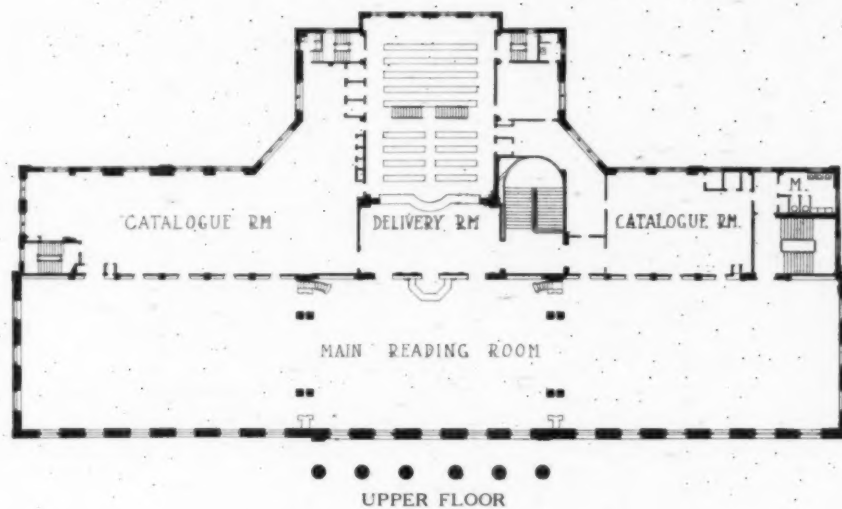
(Continued on page 329)



*Photos, Paul J. Weber*

*Plans on Back*

LIBRARY  
HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
McKIM, MEAD & WHITE, ARCHITECTS



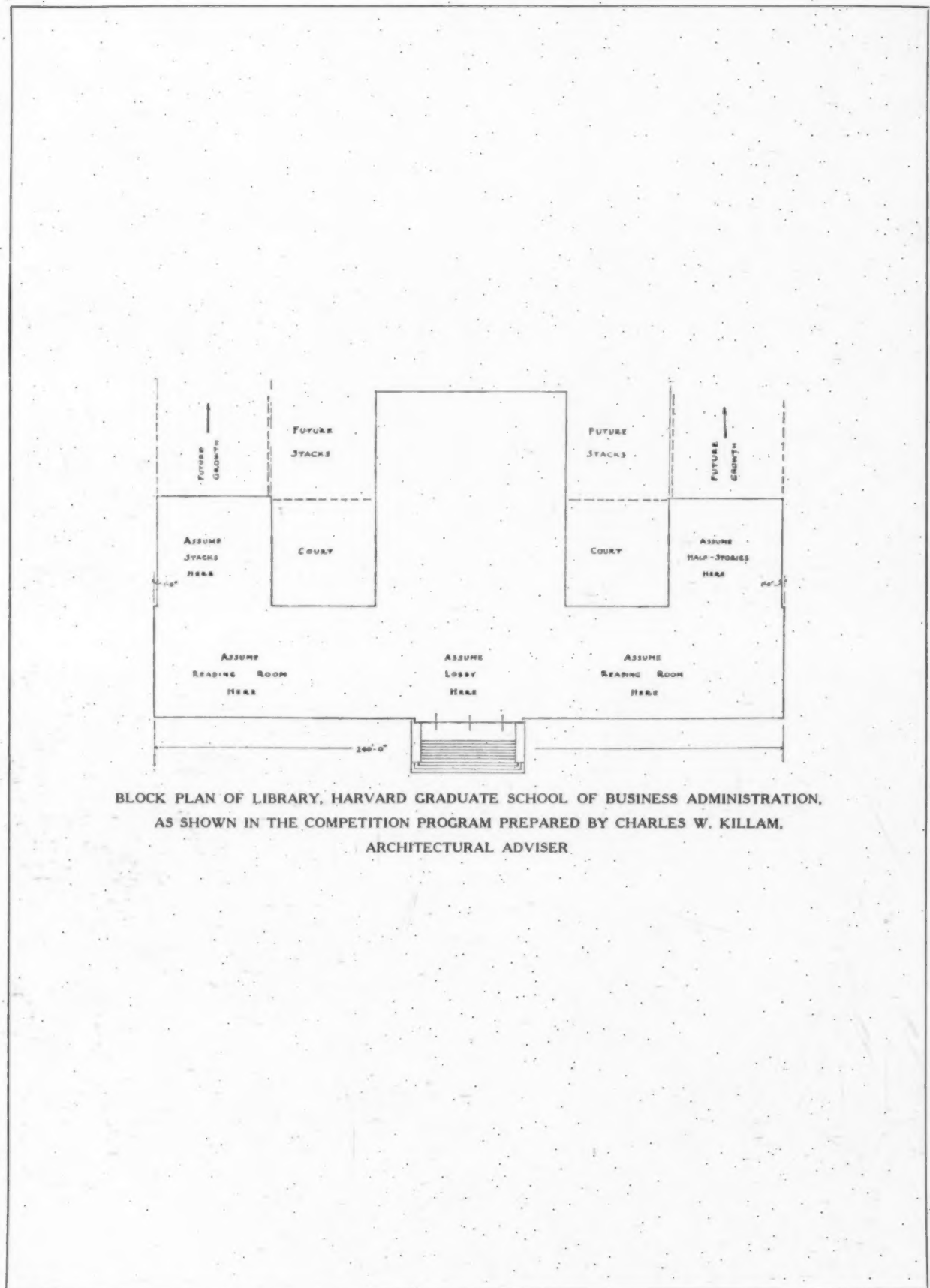
LIBRARY  
 PLANS, HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
 McKIM, MEAD & WHITE, ARCHITECTS





LIBRARY READING ROOM  
HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
McKIM, MEAD & WHITE, ARCHITECTS

*Plan on Back*



BLOCK PLAN OF LIBRARY, HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION,  
AS SHOWN IN THE COMPETITION PROGRAM PREPARED BY CHARLES W. KILLAM,  
ARCHITECTURAL ADVISER.



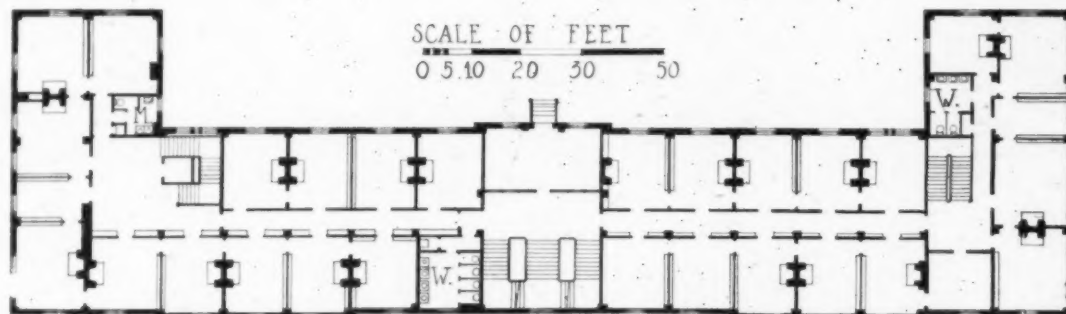
MORGAN HALL AND DORMITORIES

*Plans on Back*

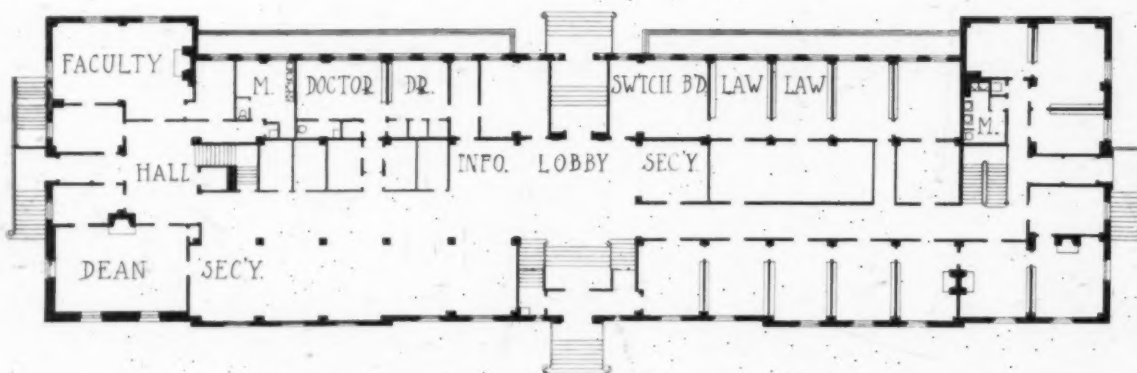


DORMITORIES AND SHERMAN HALL  
HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
McKIM, MEAD & WHITE, ARCHITECTS





SECOND FLOOR



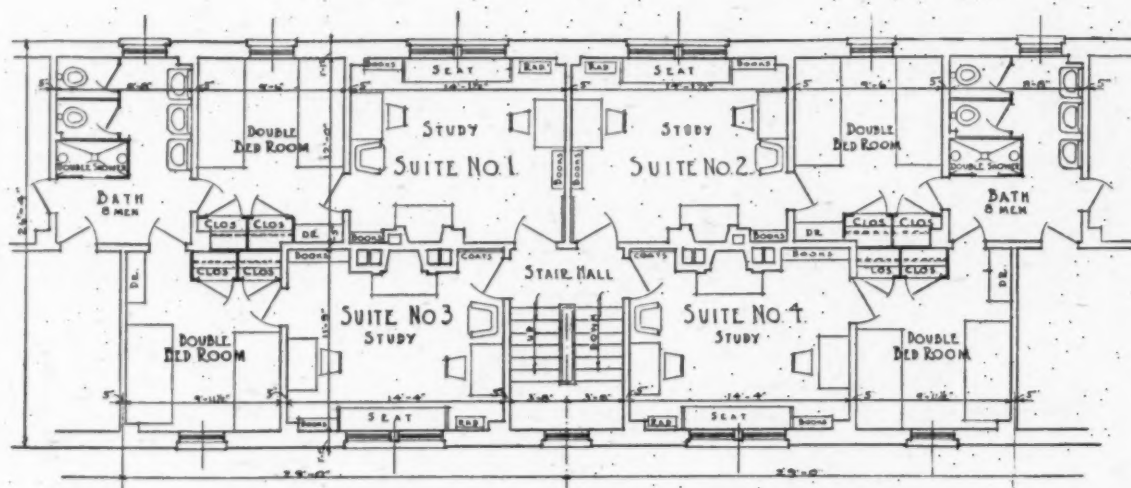
MAIN FLOOR

PLANS, MORGAN HALL  
HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
McKIM, MEAD & WHITE, ARCHITECTS

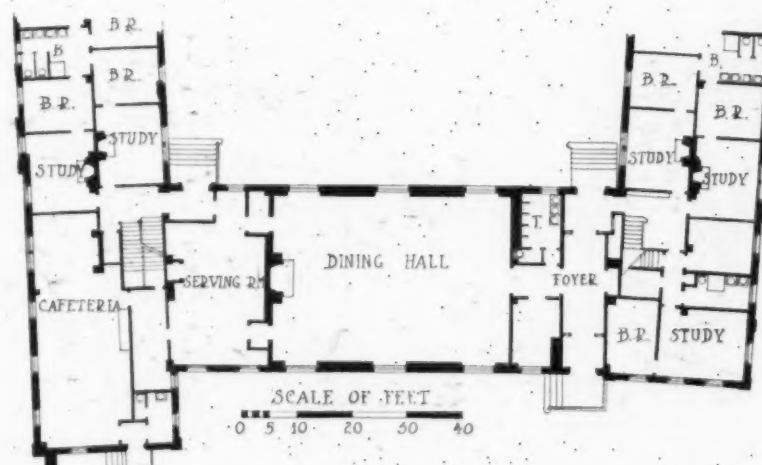


*Dormitory Plans on Back*

DORMITORIES AND SHERMAN HALL  
HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
McKIM, MEAD & WHITE, ARCHITECTS



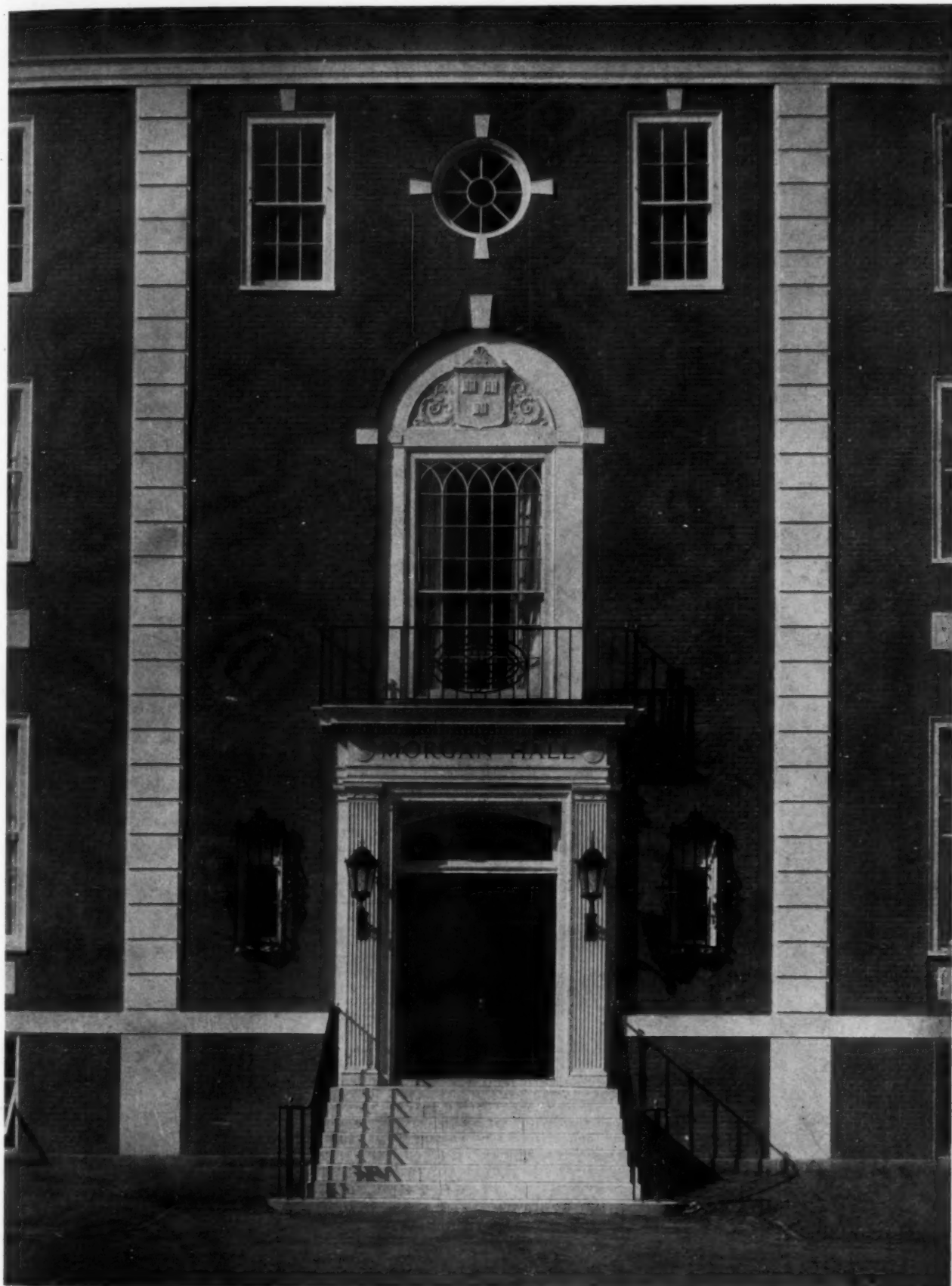
PLAN OF A DORMITORY UNIT AS GIVEN IN COMPETITION PROGRAM



FIRST FLOOR

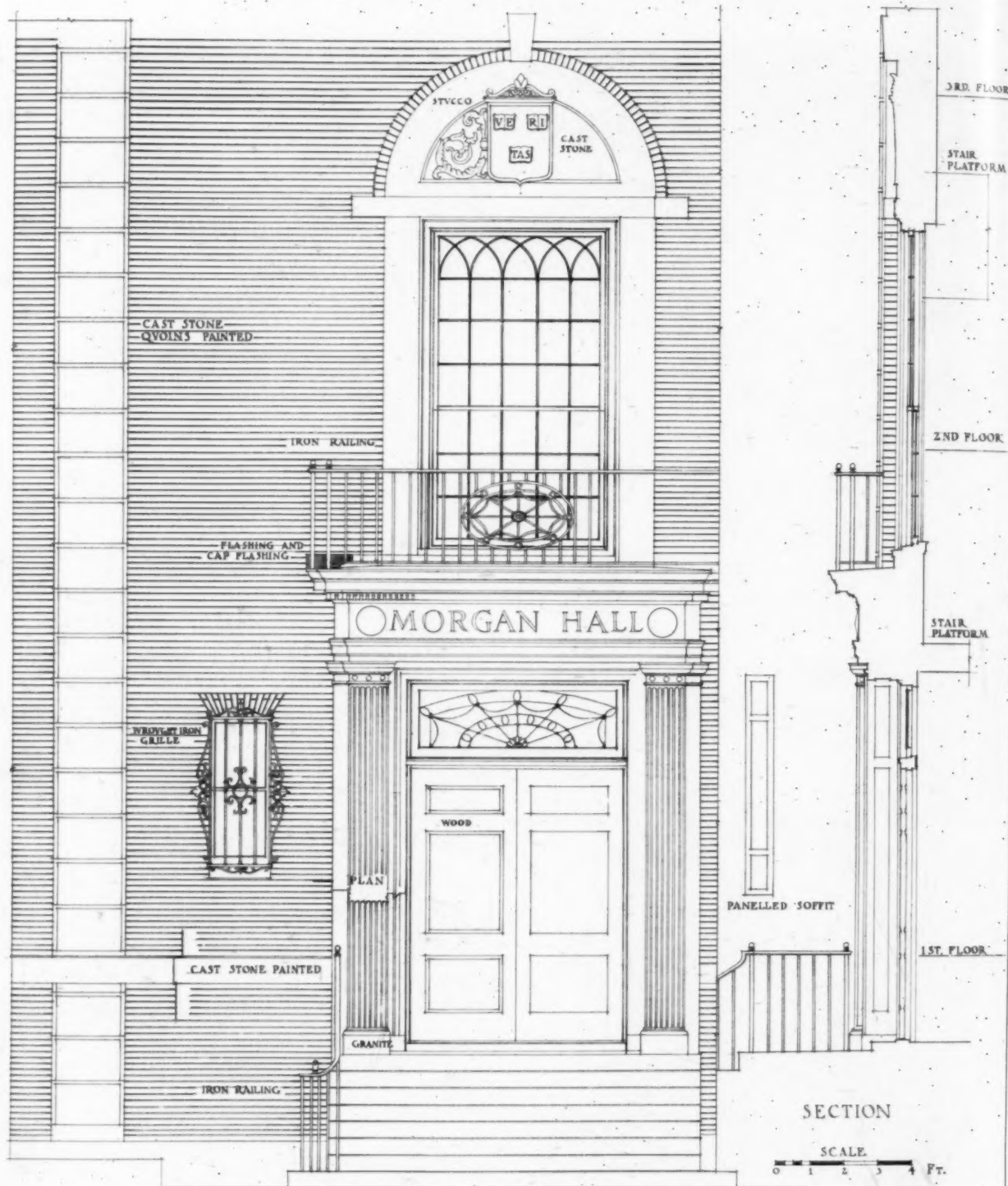
PLAN: WEST HALLS, DORMITORIES  
HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
McKIM, MEAD & WHITE, ARCHITECTS





*Detail on Back*

ENTRANCE, MORGAN HALL  
HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
McKIM, MEAD & WHITE, ARCHITECTS

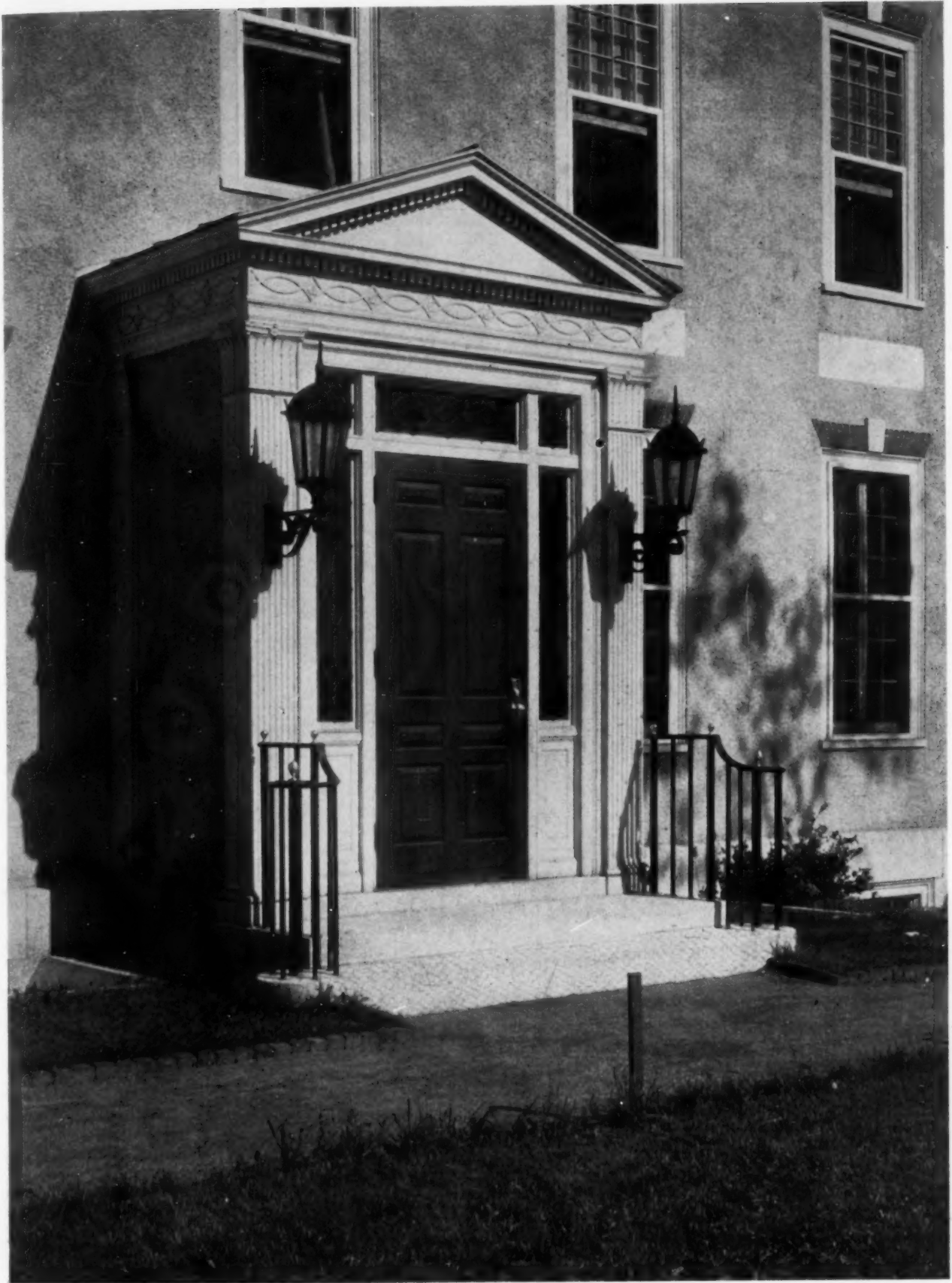


ELEVATION OF NORTH ENTRANCE  
 ADMINISTRATION BUILDING.  
 SCHOOL OF BUSINESS ADMINISTRATION HARVARD UNIV.  
 MCKIM MEAD AND WHITE ARCHT'S.

OCT.  
 1927

No.  
 38

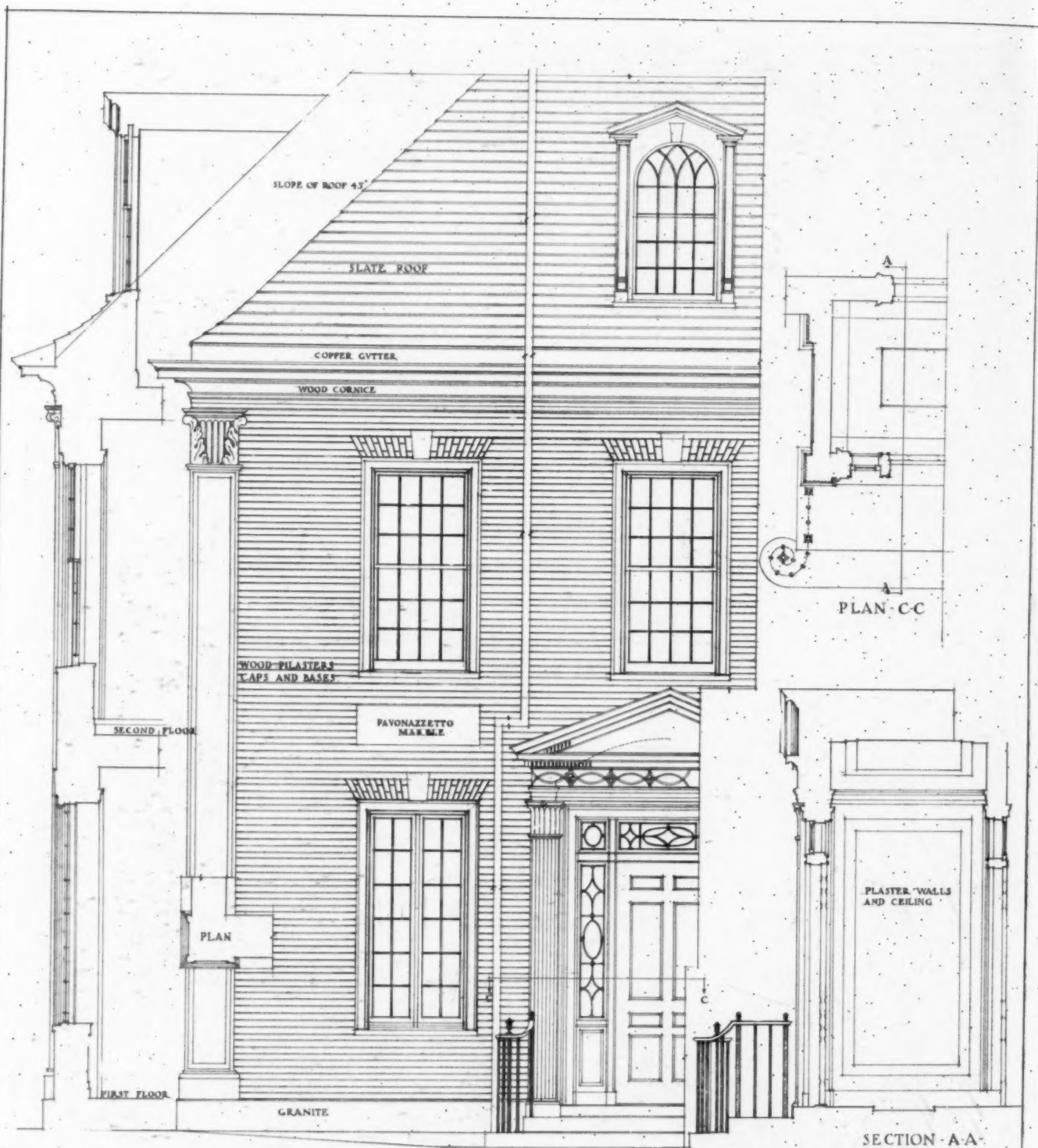
The ARCHITECTURAL FORUM DETAILS



*Detail on Back*

ENTRANCE, FACULTY CLUB  
HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
McKIM, MEAD & WHITE, ARCHITECTS





SECTION

ELEVATION OF CENTRAL ENTRANCE

OCT.  
1927

FACULTY CLUB  
SCHOOL OF BUSINESS ADMINISTRATION - HARVARD UNIV.

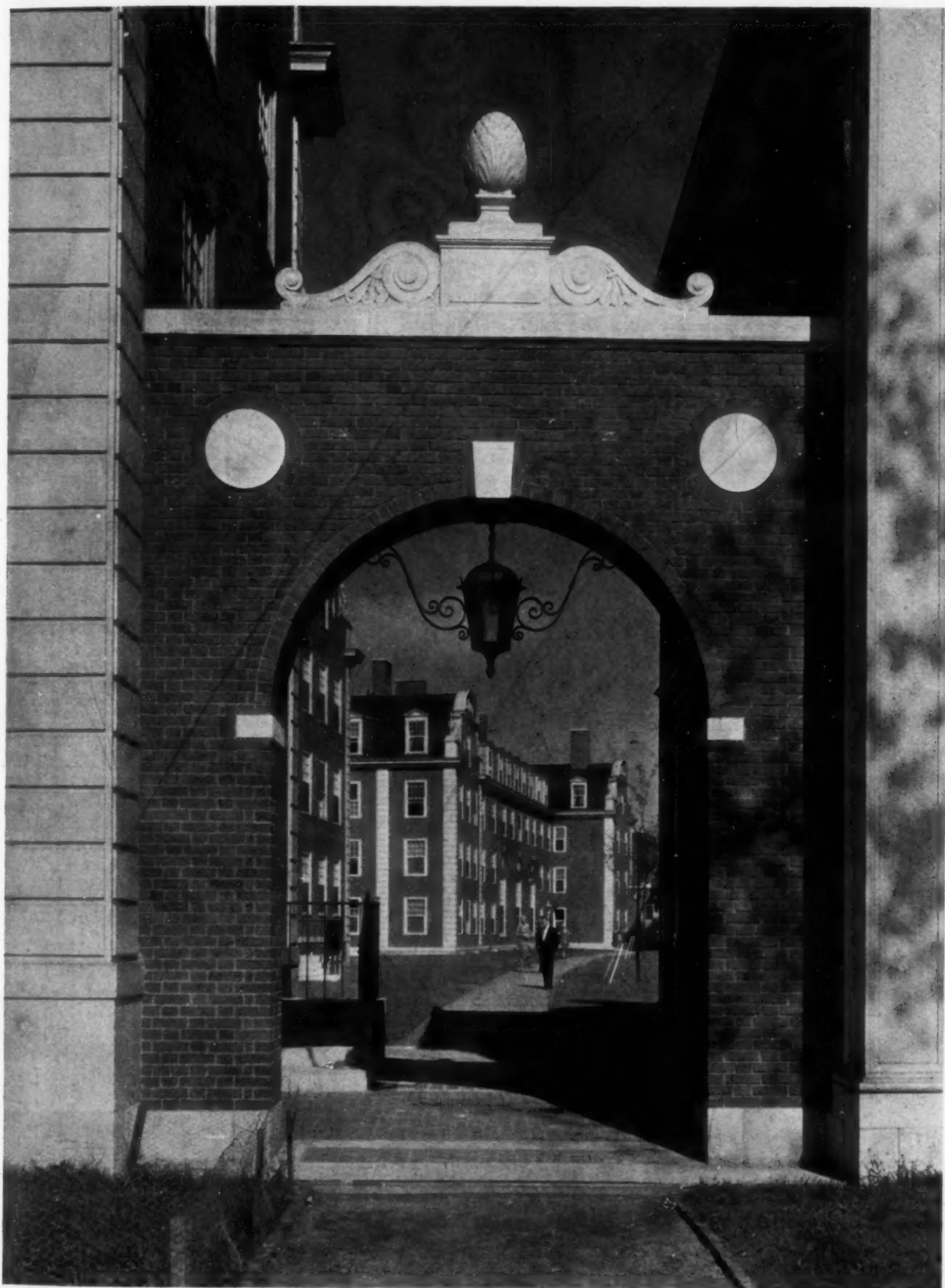
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McKIM MEAD AND WHITE - ARCH'TS.

SCALE

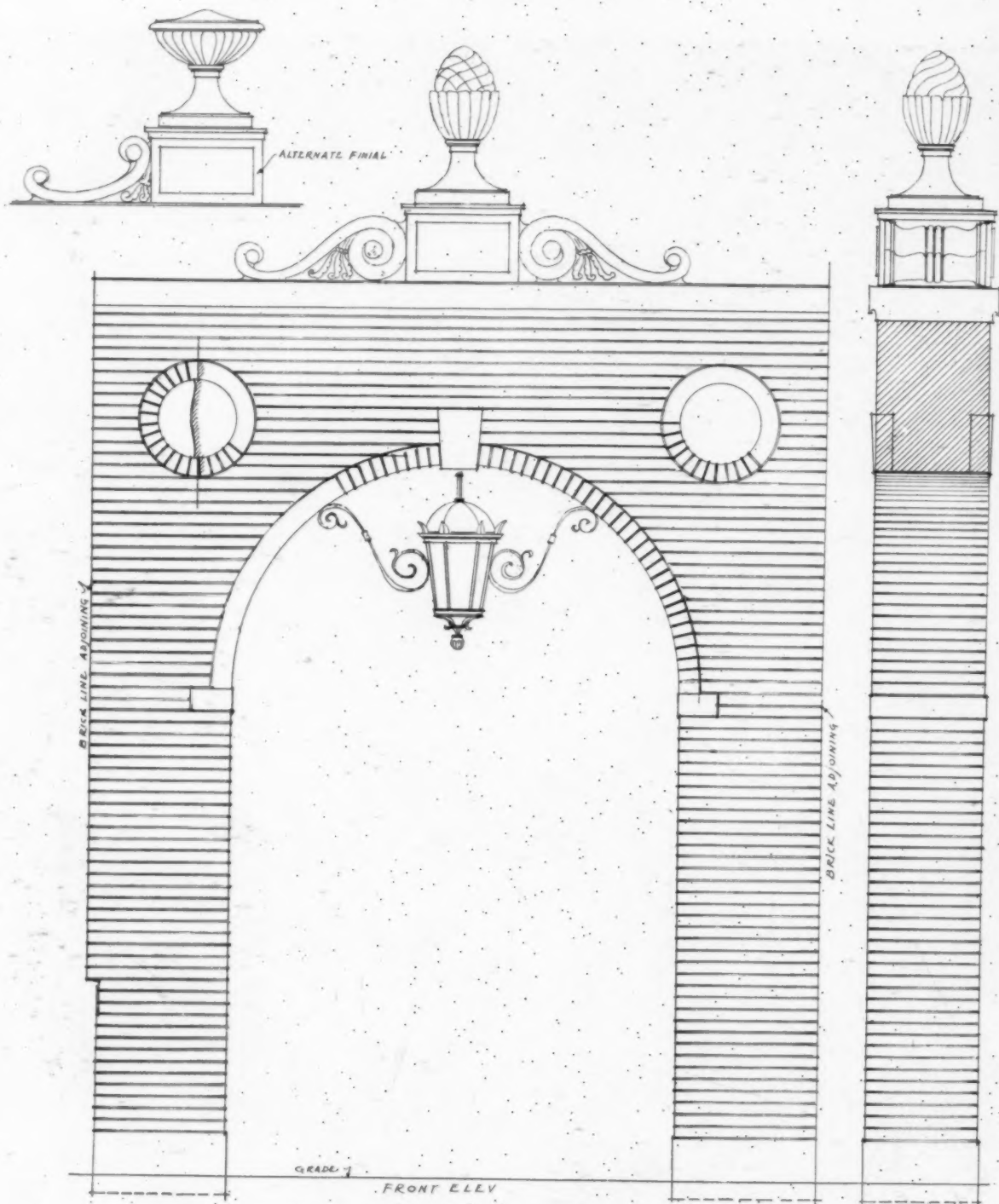
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The ARCHITECTURAL FORUM DETAILS



A CONNECTING ARCH  
HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
McKIM, MEAD & WHITE, ARCHITECTS

*Detail on Back*



ARCHED CONNECTING WALL  
SCHOOL OF BUSINESS ADMINISTRATION  
HARVARD UNIVERSITY

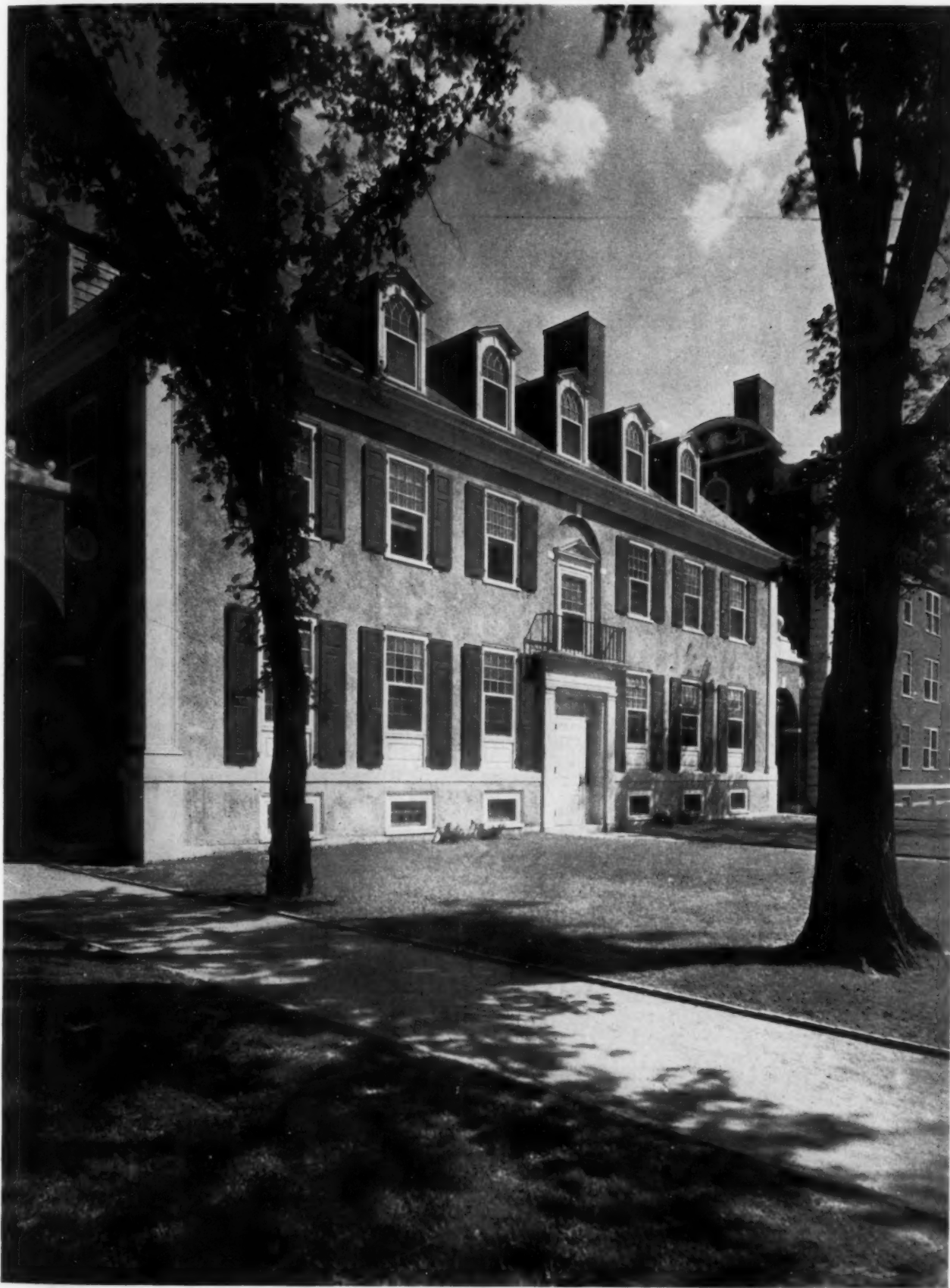
SCALE  
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1927

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The ARCHITECTURAL FORUM DETAILS





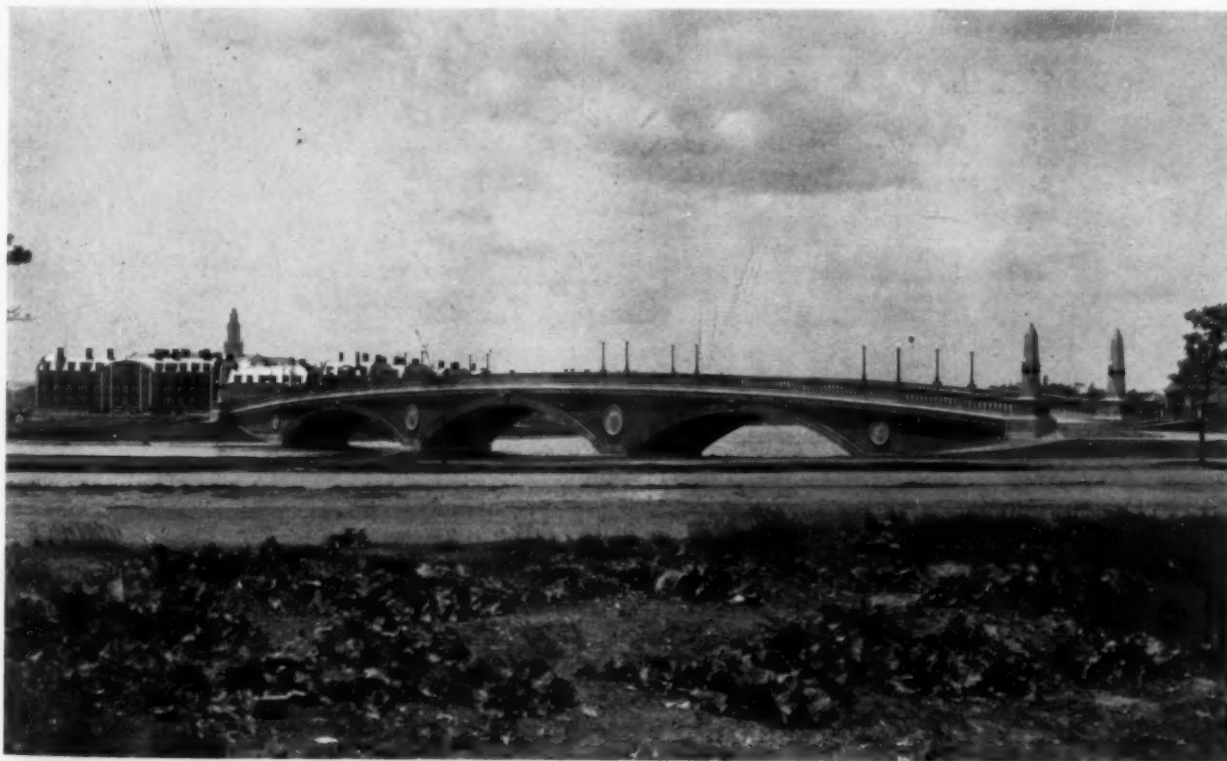
SHERMAN HALL  
HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
McKIM, MEAD & WHITE, ARCHITECTS



(Continued from page 312)

The general scheme for the Baker Library, worked out before the competition, with the delivery desk as a center, with stacks, working spaces, and reading rooms as near it as possible, was changed by increasing the number of classrooms as already noted and also by enlarging the working areas and by placing the main stairs between the delivery room and the westerly working spaces. The resulting first floor shows an entrance hall, without monumental stairs, on the main axis. Instead, there is an arched opening with iron grille showing the main stack behind it. Students can return books at this opening on the way to their classrooms without going upstairs to the main desk. A secondary desk may be established here in the future. The main stairs are on one side, so as to avoid interference with the delivery desk on the second floor. Symmetry would have called either for stairs on the main axis or for a second flight on the opposite side of the entrance hall, but the fact that any stairs at all in this position placed a barrier between the delivery desk and the working spaces in the second floor made it desirable to use one instead of two. The walls of the entrance hall are so constructed that they can in the future be changed to receive glazed exhibition cases. Most of the first floor is given up to classrooms. The method of teaching in the School is largely by student discussion of specific cases in class, directed by the professor. The seating in most of the rooms is therefore curved in plan and stepped so that students can more easily debate with one another across the room. In sections, the basement is 15 feet high, top to top; the front part of the first

story, containing classrooms, is  $22\frac{1}{2}$  feet high, top to top; the working spaces are one-half this height,  $11\frac{1}{4}$  feet, top to top, thus giving two mezzanines; and the stack tiers one-third this height,  $7\frac{1}{2}$  feet top to top,—eight tiers in all. The classrooms are therefore amply lighted by large windows, although they face north. The working areas, although only  $9\frac{1}{2}$  feet and 10 feet high in the clear, are well lighted even to the greatest depth of about 30 feet from the outer wall, because the windows are wide, with tops flush with the ceiling, and face south. When future extensions of wings and stacks are made, the present working areas will be lighted from courts about 40 feet square, but it is believed that they will still have ample light in the portions most used,—that is, for 20 feet or so inside the window walls. The second floor is the library floor proper. The student, entering the delivery room from the top of the main stairs, can turn to the right to the delivery desk, to the left to the reading room and reference desk, or go straight ahead to the card catalog corridor. Skylights over the stair hall and the delivery room give ample natural light, which would not have been possible if the delivery room had been in the first story in the same position. The School's methods require use of a large number of reserved books, which are placed in the stack tier immediately behind the delivery desk. The delivery desk is unusually long, 30 feet, because many students may come to it at one time, and also because it is used in part as the most convenient place for posting notices, which are placed under its glass top. Back of the desk for its full length three tiers of the stack show, so that on both the first and second floors the existence of the stack



Photos. Paul J. Weber

✓ The John W. Weeks Memorial Bridge



is emphasized. No pages are employed, because the use of the Library is very largely for reserved book use, supplied directly by the desk attendants. The relatively small number of books from other parts of the stack are brought by attendants in the adjacent working areas, who are kept busy most of the time on other work. The number of the book wanted is telephoned to them through the dictograph at the desk. There are no pneumatic tubes or conveyors.

The reference desk, at present in the reading room, will eventually also be extended into the delivery room, the two parts being connected by a door for the attendants. The card catalog files line one side of a corridor open to students and leading to the reading room, and the drawers are arranged so as to be drawn out either into the corridor by the students or into the working space by the attendants. A catch on the working space side prevents the drawer from being accidentally pushed through onto the floor, and a light, operated from the students' side, calls the attention of the workers when a drawer desired by a student is being used by the workers. On the westerly side of the delivery room, balancing the main catalog, is the beginning of a digest catalog, that is, references on cards to the subject matter in the collection. These drawers also open outward for students and inward to the working spaces. The reading room, extending the entire length of the northern front in the second story, is about 43 feet wide, 240 feet long, and 24 feet high to the crown of the segmental ceiling. It seats 422 men. It is divided approximately into thirds by coupled columns in a Palladian motif to break up its length. The ceiling curve was adjusted to give desirable acoustic

qualities, and the floor is of rubber, but no other precautions were taken to obtain quiet. The tables are 4 feet by 15 feet, spaced 62 inches in the clear, but with occasional wider spaces for trucking. There are 10 seats to each table, so that each man has a space 3 feet wide by 2 feet deep to the center of the table, and there are no table lamps to interfere with his work. This unusually roomy seating is desirable for the students in this School, because of the number of books they have to use at one time. The room has a balcony on one side and bookcases all around holding the reference books in most common use.

Most of the natural lighting of this room comes from the windows on the northern front. Some direct sunlight enters through the eastern and western end windows in the early morning and late afternoon, but not enough to require shades, which are preferably to be avoided if possible. The window lighting is supplemented by skylights, most of which are on the southern slope of the roof, where they are unobjectionable architecturally. The direct sunlight is diffused by the glass in the skylights and in the ceiling lights which occupy about one-third of the segmental ceiling. In the middle portion of the room, back of the entrance portico colonnade which darkens it somewhat, a skylight shows on the northern slope of the roof where it was undesirable, but it was felt worth while to make sure of adequate natural light, and the thoroughly satisfactory result justifies the method. Artificial lighting by table lamps, cove lighting, lights above the ceiling lights, bookcase lights, units hung from the ceiling, and various combinations of these, were considered, and the final decision was to use 34 units hung from the ceiling



Glass Hall, Harvard Graduate School of Business Administration

about 12 feet above the floor, each covering an area of about 13 by 22 feet. These units were especially designed and may be described as an indirect type having its own reflecting ceiling included in the fixture itself. The fixture is 36 inches in diameter with an annular plaster reflecting surface, segmental in cross section, above the lamp and facing down. This surface is so brilliantly lighted that it has to be concealed from the eyes of the readers by an ornamental circular bronze "skirt" about 12 inches deep, so that, even in this very long room, a reader looking up at any natural angle from his work can see only the bottom of the globe below the reflector under the lamp, and this globe has only diffused light showing through it. The lamps are 750-watt and give ample light. No table lamps are used, although outlets are provided in the floor in case it is ever felt desirable to install them on some of the tables, and outlets are also provided for future bookcase lights. Lighting the entire room with 34 units seemed to be the cheapest in original cost, cheapest in cost of current, and easiest to keep clean and in order. The units have been criticized as being too numerous, but the dull bronze "skirts," together with the gilded caps of the pilasters all around the room, are generally admired as pleasantly enriching the room with the brown oak finish of its woodwork and brown strip rubber flooring.

The family of the late Senator Nelson W. Aldrich, of Rhode Island, has given his library on finance to the School, and is also finishing and furnishing the room to contain it. This room is on the first mezzanine floor, entered from the first landing of the main stairs, and has bookcases and wainscoting in oak and an ornamental plaster ceiling in low relief.

Architecturally this room may be said to derive from English work somewhat earlier than the Georgian. William T. Aldrich, one of the sons of the Senator, is the architect of this room. Being a relatively small room in one of the low mezzanines, divided by bookcases into alcoves, and with a fireplace, the room will have an atmosphere altogether different from that of the main reading room, and both the books and the room are a much appreciated addition to the Library, aiding in the completing of its collections.

The main stack has eight tiers, the first level with the basement floor, the third level with the first floor, and the sixth level with the second floor. The working spaces at the basement, first, and second floor levels are therefore even with stack floors, but the working spaces at first and second mezzanine levels come midway between the stack floor grades. As trucks must pass from one to the other, and as ramps would be too long, the elevators were placed along the line of the partitions between working spaces and stack and provided with doors at each end so that trucks can be transferred from any working area to any part of the stack. The stack shelves are 19 $\frac{5}{8}$  inches wide, the ranges are 50 inches center to center, and the tiers 7 $\frac{1}{2}$  feet top to top. The side aisles are unusually wide because they are planned to serve the much larger stack to be expected in the future. The floors are of marble, and there are no raised thresholds in doorways through which trucks are to pass. The lights between the ranges are controlled by pull-chain switches at each end of each aisle. The stack stairs are placed with one side directly against the shelving, with no handrail on that side. This makes it impossible to change the particular shelves



Students' Club, Harvard Graduate School of Business Administration



which come back of the string, but the saving in space was considered worth while. The well sides of the stairs have a handrail but no balusters. The rise is  $7\frac{1}{2}$  inches, and the tread 10 inches, and they are entirely comfortable. The study cubicles for instructors and for some advanced students are 60 inches center to center and  $43\frac{1}{2}$  inches deep. The divisions are of metal, commencing 12 inches from the floor and extending to 5 feet from the floor, being open above that. Each cubicle has its own window, radiator, table 30 inches by 42 inches, chair, and electric light on a cord hung trolley-wise on an exposed conduit overhead. Three push-button elevators have been installed at present, but the framing allows more to be added as expansion occurs. The cars are 39 inches by 46 inches in clear inside, and hold five or six people, or two or three people, and a truck. They have doors at both narrow ends, for the reason already explained, except in the basement, where the machine rooms interfered. It would have been better to have the doors at both ends there also. There are four booklifts, each 20 inches by 28 inches, with doors at both ends. Accessions are received at the eastern end of the basement, either by hand down the area steps, by runway, or by sidewalk elevator. They enter between the offices of the superintendent and the janitor into the unpacking room, and then go to the basement working space directly under the working area in the upper stories but extended out also under the court with a skylight above. Adjoining this basement working space is a two-tier stack for sorting and retaining accessions until sets can be completed. Books are then sent up to the cataloging room by booklift or, if the number is large, by truck in an elevator. A branch post office is established in the basement. A tunnel connects the Baker Library with Morgan Hall.

Morgan Hall, the Administration Building, contains offices for the Dean and his assistants, the Secretary and Registrar of the School, studies for professors, accounting laboratories, rooms for business research, and a laboratory for the study of industrial physiology. As the offices of the Dean and the general office on the first floor required a deeper building than was necessary in the upper

floors, the first story was made about 14 feet high in the clear in general, but only about 10 feet high in the one-story portion in the rear between the wings. This gives high, dignified general offices, and windows over this low roof and close to the ceiling of the general office give direct sunlight and a cross circulation of air in this room which make it both light and cool. Many of the professors' offices have fireplaces, are well supplied with bookcases, and have flooring of rubber strips resembling brown floor boards, and they are so grouped by departments separated by narrow corridors that they have something of the atmosphere of studies in a dormitory rather than rooms in an office building. The basement has many workers, and the building was therefore set well out of the ground and the windows were made larger than the architects liked. They have proved to be good working rooms, even in hot summer weather.

Three or four points suggested by his experience on this project interested the writer and may be of interest to the profession. The almost unanimously favorable testimony of the large number of clients who wrote letters of reference for the architects applying for admission to the competition is a cheer-



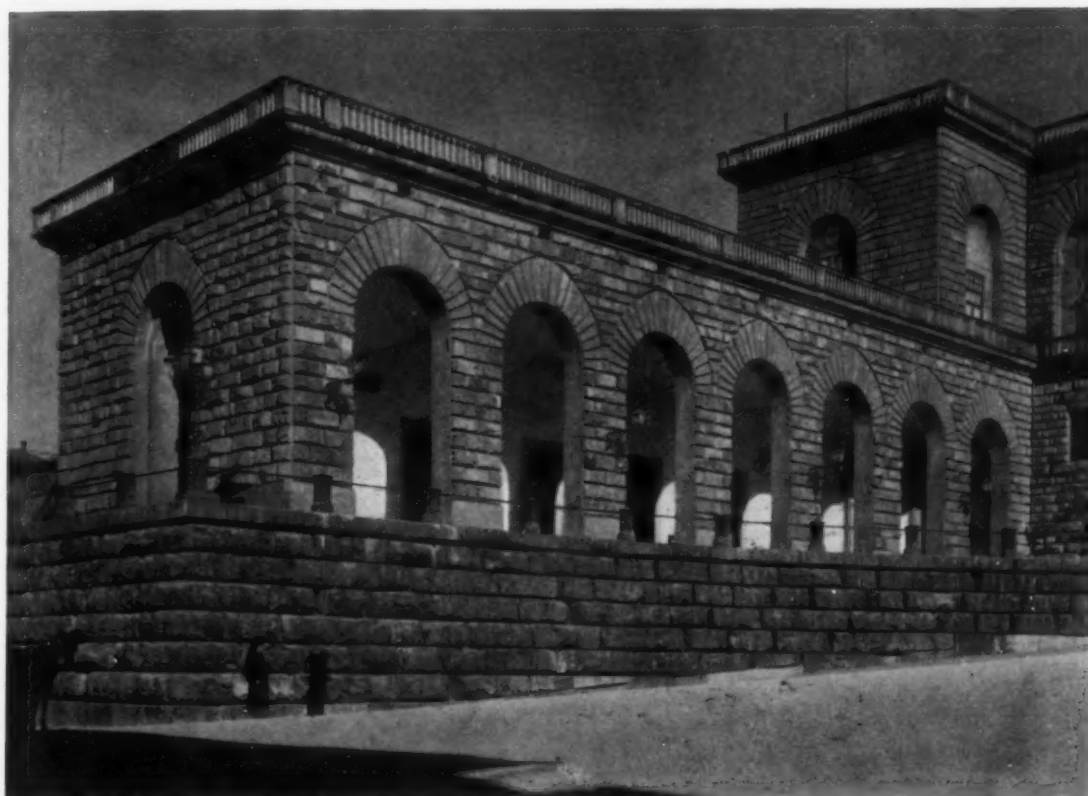
Arch in Dormitory Group

ing contradiction to the *non sequitur* of some engineers and builders that if a man is architect enough to insist upon beauty he will therefore neglect utility and economy. A simple straightforward plan won the competition and was carried out in its most important essentials, so that in this case, at least, the competition not only resulted in the selection of an architect, but in the selection of a general scheme. When a college building is to be built from funds given by a resident of another state, and is to be used to educate students from all over the world, should the architects, contractors, and material men be selected from local firms because the college is exempt from local taxation, or can it be argued that the college should be free to go as far for its architects and contractors as it does for its donors and students, always providing it can thus obtain better service and is thus enabled to give more service to its students? Should college buildings be expensive and richly decorated, or should they be simple although well designed?



# The Forum Studies of European Precedents

## EIGHT LOGGIAS IN FLORENCE



ALTHOUGH the loggia in this illustration was the last built of those here shown, it does come first in style. Brunelleschi designed this great palace for Luca Pitti, and the main portion was erected in 1435; but these loggia wings were not added, it seems, until 1763,—more than three centuries later. However, they almost appear to be part of the original work, as they possess the same rustication, band course and balustrade. The only variation is in the treatment of the voussoirs, which form a more nearly pointed arch because of the comparatively close spacing of the openings. Far more noted for its loggia is Brunelleschi's famous *Ospedale degli Innocenti* (1421-1445), shown on the next page. This has served as a model for arcades through the centuries, and rarely has it been surpassed. The simple cavetto above the cap serves to take the arch without over-stilting it, as was so often the case when the whole entablature was included. It forms a pleasing transitional element that visually relieves the load on the cap. The arcade of the courtyard does not seem to require this feature because it is so much smaller in scale. The "little brown fellow's" feeling for scale and detail is shown in these arcades, in the simplification of the cap and moulding of the smaller interior arcade, and in the omission of the impost block. The bosses under the wall-caps have been lightened and also refined. This loggia receives more attention from the visitor because of the della Robbia *bambinos* than because of its architecture.

It is interesting to compare the *Innocenti* loggia with that of 40 Via San Gallo. The latter suffers because of the heavy arch mouldings and would be better if it had colored terra cotta in the spandrels. It does show, however, the more usual flat pilaster cap to take the vaulting on the inner wall,—a form more fitting than the half-round. The other illustrations show, in addition to the rich Palazzo Vecchio court, the colorful market place, a smaller interior courtyard, and the more domestic loggia under the cornice of the Palazzo Vecchio.





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Photos. Paul J. Weber

LOGGIA, OSPEDALE DEGLI INNOCENTI, FLORENCE (1421-1445)

Filippo Brunelleschi, Architect

*The Forum Studies of European Precedents; Plate 98*

THE ARCHITECTURAL FORUM

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LOGGIA OF THE COURT, OSPEDALE DEGLI INNOCENTI, FLORENCE  
Filippo Brunelleschi, Architect

*The Forum Studies of European Precedents; Plate 99*

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LOGGIA, NO. 40 VIA SAN GALLO, FLORENCE

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LOGGIA OF THE COURT, PALAZZO VECCHIO, FLORENCE (1565)

Decorated by Marco de Faenza

*The Forum Studies of European Precedents; Plate 101*

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MARKET LOGGIA, MERCATO NUOVO, FLORENCE (1547-51)

Giovanni Battista Tasso, Architect

*The Forum Studies of European Precedents; Plate 102*

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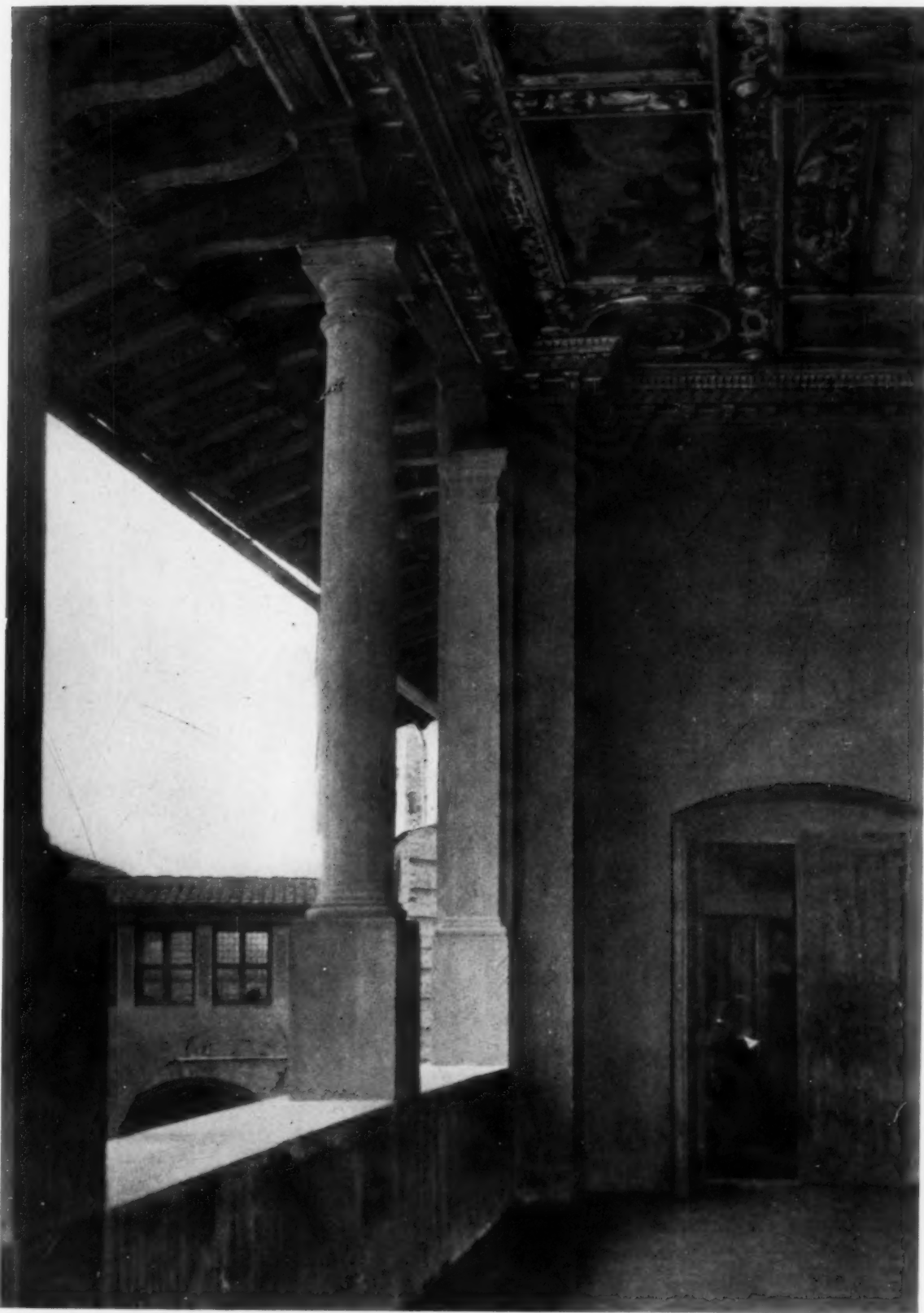
VESTIBULE AND COURT, PALAZZO ANTINORI, FLORENCE

*The Forum Studies of European Precedents; Plate 103*

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October, 1927





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LOGGIA, PALAZZO VECCHIO, FLORENCE

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October, 1927





# ENGINEERING DEPARTMENT

## ✓ The Construction and Equipment

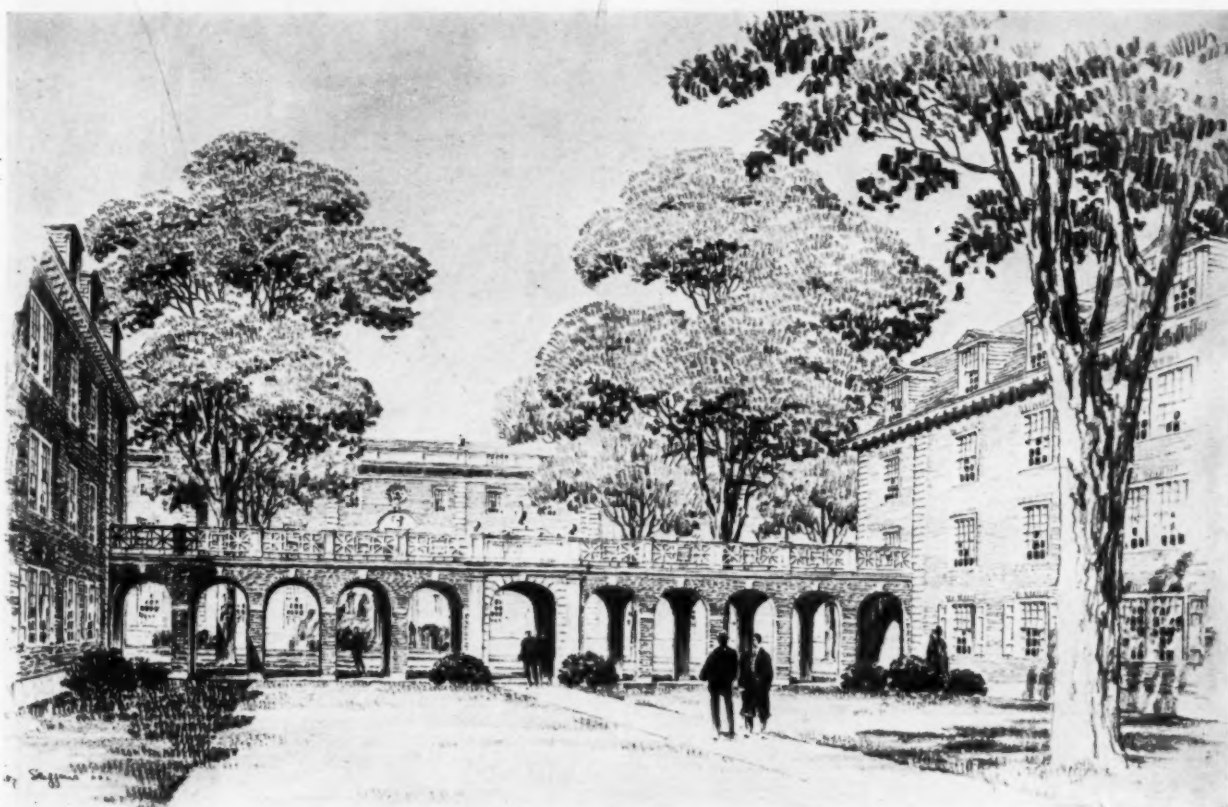
of the

HARVARD GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

**B**EFORE these buildings could be located, the intentions of the authorities having to do with planning and constructing roads, parkways, water supply systems and sewers in the Metropolitan District had to be ascertained. The relatively low level of the finished grades in relation to the river and the adjacent sewers needed careful study, since every foot the finished grade was raised meant a large volume of required fill, while the lower the basement floor was placed the greater the risk of dampness. About three-quarters of the areas of the foundations reached good bottom at a reasonable depth, but this good bottom sloped downward at the easterly end of the ground and was overlaid with peat and fill. About one-quarter of the foundations, therefore, were carried down through this peat on concrete piers averaging about 3 feet in diameter, belled out to about 6 feet at the bottom. These piers, spaced about 14 feet apart under the outer walls, supported the concrete foundation which acted as a

deep beam from pier to pier. In one portion, where the basement was deepest, several feet of fill placed on top of the peat to form a road caused the peat to compress and flow laterally so as to slightly displace three or four of the concrete piers. Uncertainty as to what this displacement had done to the bottoms of the piers made it seem advisable to put down three new piers between the old to insure safety.

Some of the underground piping and cables were of large sizes. The water supply is 8 inches; steam supply pipes from across the river are 10 inches; sanitary sewers 12 and 15 inches; and surface water drains 30 inches. These pipes, where buried in the peat or in fill above it, were supported where necessary on wooden piles cut off below the level of the water in the river and extended up in concrete. Some of these structures moved laterally and some vertically as the fill was brought up to grade. An 8-inch cast iron water pipe, secured to the outside of the foundation wall by 1-inch diameter brass U-shaped



Preliminary Drawing, Arcade Joining Dormitories  
McKim, Mead & White, Architects

stirrups set horizontally, settled under the weight of about 6 feet of fill above it enough to break some of the stirrups at the root of the thread which had been turned on the ends to increase the bond resistance in the wall. Electric cables were broken by the soil movement. In the Freshman Dormitories, built about 13 years before across the river from this group, cast iron house drains beneath the basement floors have been attacked by some agency in the soil which has apparently dissolved the iron, leaving only the carbon, with the result that they have become brittle, can be whittled with a pen knife like a hard lead pencil, and have cracked and leaked. To guard against this trouble, the house drains under the kitchen portion of the Business School basement were encased in concrete, cast on the under side of the floor, which itself had to be reinforced to carry from footing to footing over the peat in this part of the area. The peat will undoubtedly continue to settle for years, carrying down the soil above it. The lawn above this peat has already settled about 4 inches in places, and the maintenance of trees and shrubbery on such ground presents a troublesome problem, since the ground level is continually disturbed.

The whole group of buildings is of fireproof construction with the exception of the roofs of the dormitories. These were originally designed with a gambrel section in most of their length and intended to be constructed of steel and concrete. A considerable saving was made by changing the gambrel to a pitch roof and having the rafters of wood with fiber insulation and metal lath and plaster ceilings in the attic. The walls of the dormitories are of brick backed with hollow tile, and are bearing walls except at the dining rooms. The floor construction is of reinforced concrete joists with hollow tile fillers, the tile in general being 4 inches deep and the top slab 3 inches, which includes the surface finished to receive the rubber flooring without any fill. In the Baker Library and Morgan Hall the roofs as well as the floors are of fireproof construction; the floors being of reinforced concrete joists with hollow tile fillers 4 or 6 inches deep, supported on steel girders and columns, including columns in the outside walls. Rubber flooring has been very extensively used. In the dormitory studies, in the professors' studies, and in the main reading room of the Baker Library this is in the form of strips 6 and



*Photos. Paul J. Weber*

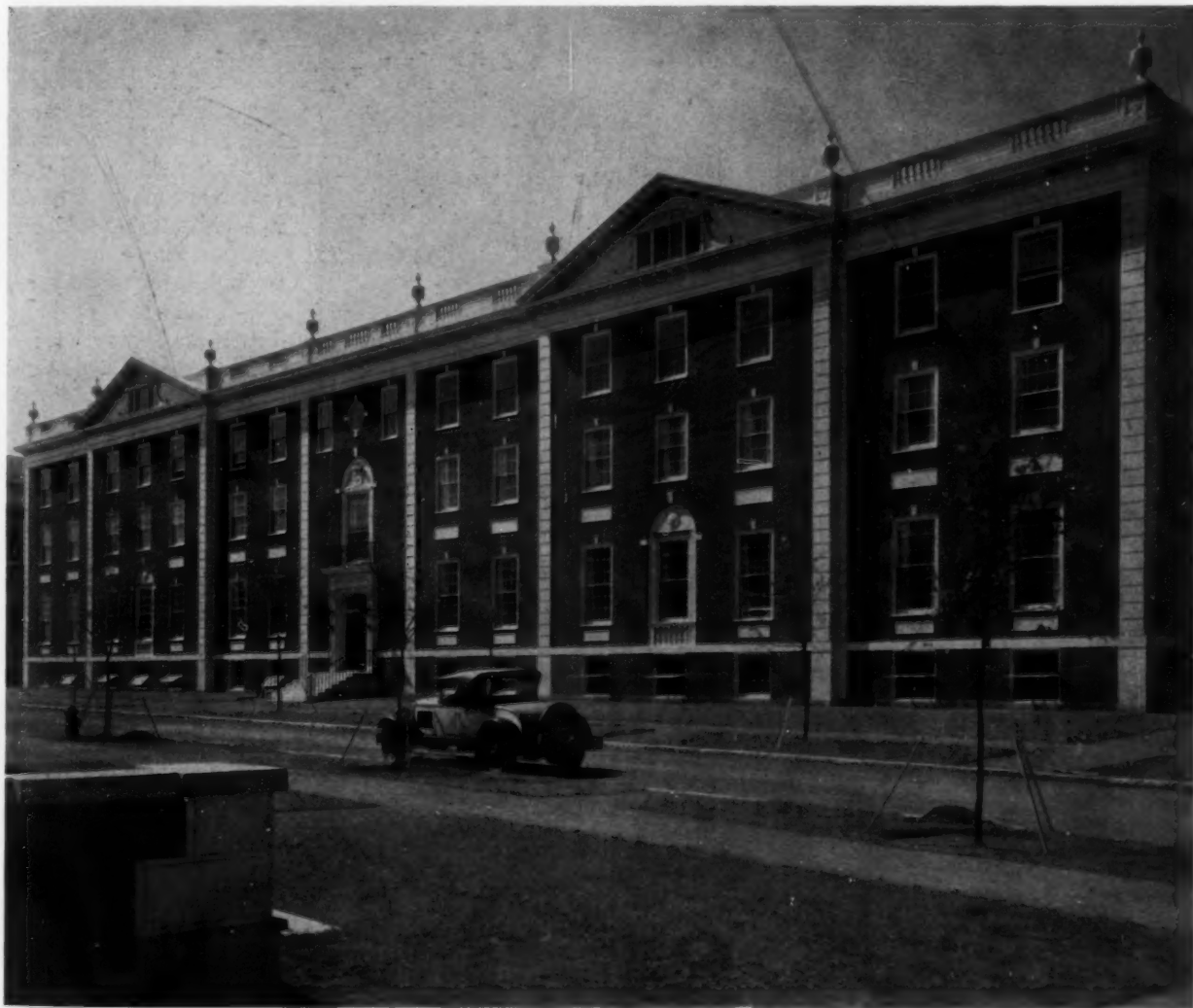
General View, Harvard Graduate School of Business Administration



8 inches wide, 6 feet long, resembling brown floor boards. In some other rooms it was used in the form of square tiles, and in other places in sheets 3 feet wide. Acoustic plaster was used in the ceilings of the dining halls. Working spaces and classrooms in the Library were finished with acoustic felt, which was also used above the kitchen. The walls and ceilings in the dormitories were finished in a plaster containing coloring matter which, while increasing the cost of the plastering, saved the time and cost of painting. It can, of course, be painted or covered with burlap in the future when it is required. It could also be treated in any other way.

The buildings are heated by water which is heated in the basement of McCulloch Hall by steam brought over the John W. Weeks Bridge from the power house of the Boston Elevated Railway. It is circulated by pumps in the same place, distributed by supplies in the roof spaces, feeding downward to the radiators as single-pipe risers. The bedrooms in the dormitories have no radiators, and the radiators in the studies, except the studies with beds in them, have no valves, as inquiry in other dormitories of the University disclosed the fact that they were very

little used. Plenum fans are used in the Baker Library for ventilation of classrooms, reading room and stacks, with exhaust fans for the toilets. Plenum fans are used in Morgan Hall to ventilate the basement and exhaust fans to ventilate the laboratories on the top floor and also the toilets. The buildings are faced with a hand-made, water-struck red brick laid in Flemish bond. Some of the headers are black, but more of them have a grayish green vitreous surface of different shades. The mortar joints are  $\frac{3}{8}$ -inch thick, raked out roughly to a depth of about  $\frac{1}{8}$ -inch. The vertical joints are slightly out of plumb, but there is no eccentricity of wide joints or skin-tingling or sand-blasting to imitate age; the brickwork simply resembles that of the older buildings of the University, built during the last 25 years. There is some granite, limestone and marble trim, but the quoins and some of the gable coping and ornamental work are of cast stone painted ivory to resemble the wooden quoins sometimes used on Colonial brick buildings. The whole library portico is of wood, as are also all balustrades and cornices. The urns are of copper, and there is some cast lead ornamental work, all painted ivory like the quoins and window



Morgan Hall, Harvard Graduate School of Business Administration

frames. The clubs and instructors' houses are of a grayish cream stucco on brick, as are also portions of the facades on the dormitory courts. The roofs are covered with gray slates from Virginia,  $\frac{1}{4}$ -inch thick, and the sides of the dormers are covered with lead-clad copper. The entire use of materials is consistent.

A number of features which the architects felt were desirable to finish the design were omitted for the sake of economy, although in some cases provisions have been made in framing or otherwise to add them in future if found practicable. The architects particularly regretted the omission of the tall cupolas or towers, which they designed for Mellon and Hamilton Halls, the two dormitories on the Parkway, which are about 300 feet long each and need some break in their roof lines. They also urged the need of more balustrades in the dormitory groups above the cornices at the foot of the sloping roofs as well as shutters on more of the windows. Very little money could be spent on cut stone or on interior marble, on wainscots and mantels, or on ornament in general. Everyone connected with the work would of course desire more and larger trees to soften the lines

and to give shade and seclusion. A fence would help to give privacy and would add to the unity of the composition as a whole, something which is to be desired.

The dormitories cost about 80 cents per cubic foot, the Baker Library about 65, and Morgan Hall about 62. The cube was measured to include 2 feet below the basement floor and the true cross-section of the sloping roofs. This cost includes that of the competition as well as architects' and engineers' fees, and also the cost of the tunnels between the buildings, but it does not include the utilities outside the buildings nor the filling and landscape work. About 52 per cent of the work was sublet, leaving 48 per cent to be done by the contractor direct,—a rather large amount as compared with the general custom of the contractors, who frequently sublet the greater part.

The dormitory halls are named after Secretaries of the Treasury, selected by Mr. Baker, who in his long banking career has enjoyed close relations with many of them. The Administration Building was named after the late J. Pierpont Morgan, a long-time

friend and business associate of Mr. Baker's. The Library will be called the Baker Library after Mr. Baker himself, although, of course, the entire group is to a greater or less extent a memorial to him.

McKim, Mead & White were the architects, with William Mitchell Kendall, himself a Harvard graduate, directing the design with full and sympathetic appreciation of the environment and of the desire

of the University authorities to make the environment count educationally. Mr. Fenner did his valuable part until his death, and added to the large number of those who admired and respected him. C. J. White, not to be confused with Lawrence Grant White of the firm, had charge of the whole project under Mr. Kendall's direction, and his patience and efficiency were appreciated by all of those who represented the University. President A. Lawrence Lowell and Wallace B. Donham, Dean of the School, both men who take an unusually practical, intelligent, and fair minded interest in architectural problems, gave much time to the project, even to details. The writer served as Professional Adviser, not only during a half-year sabbatical at the time of the competition, but also

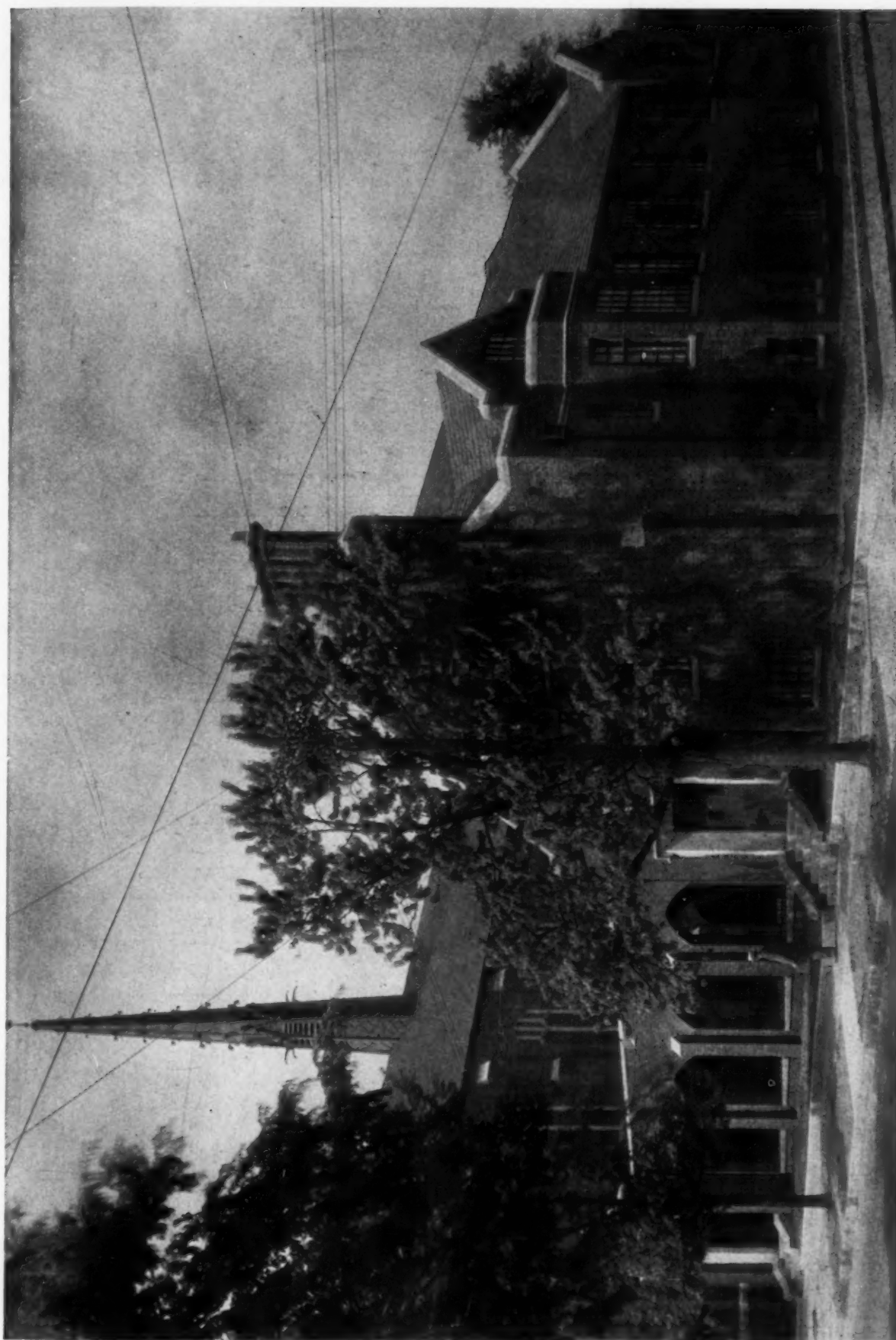


The Library from Gallatin Hall

for the whole period of the construction in addition to his work in the Department of Architecture.

This very complicated project required the cooperation of a very large number of people, including also governmental bodies, public service companies, and labor, all of whose rights, duties, opinions, and even prejudices were fairly and tactfully considered. It had to be carried through quickly and yet economically and with a long look into the future, because college buildings endure through long periods, during which educational methods often change. These results had to be accomplished by men most of whom were busy and burdened with other responsibilities. Two buildings at Harvard have been in use for 200 years, and it is desirable on sentimental grounds that the externals at least of college buildings should last through the centuries, although educational methods will change. This fact was constantly in the minds of the designers, who exercised careful discrimination in the selection of materials of both the structures and of the highly important mechanical plant.

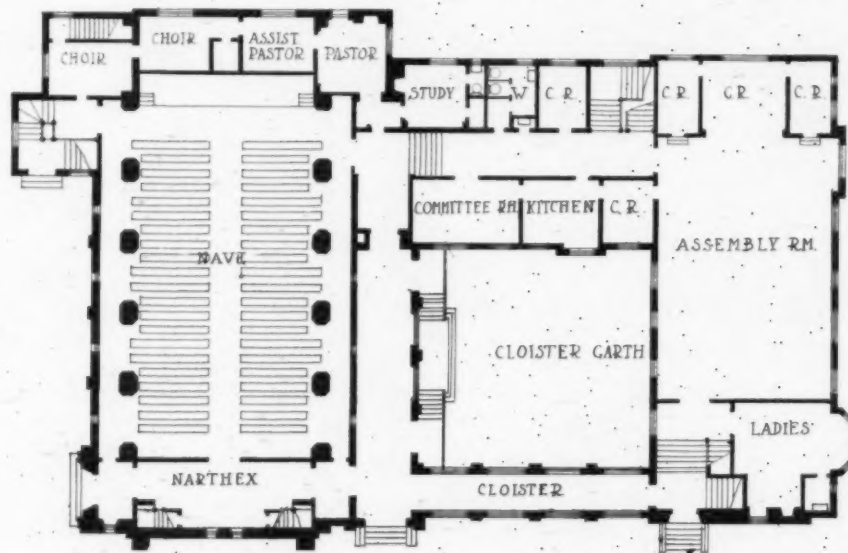




Plans on Back

WESTMINSTER PRESBYTERIAN CHURCH, LYNCHBURG, VA.  
CLARK & CROWE, ARCHITECTS.





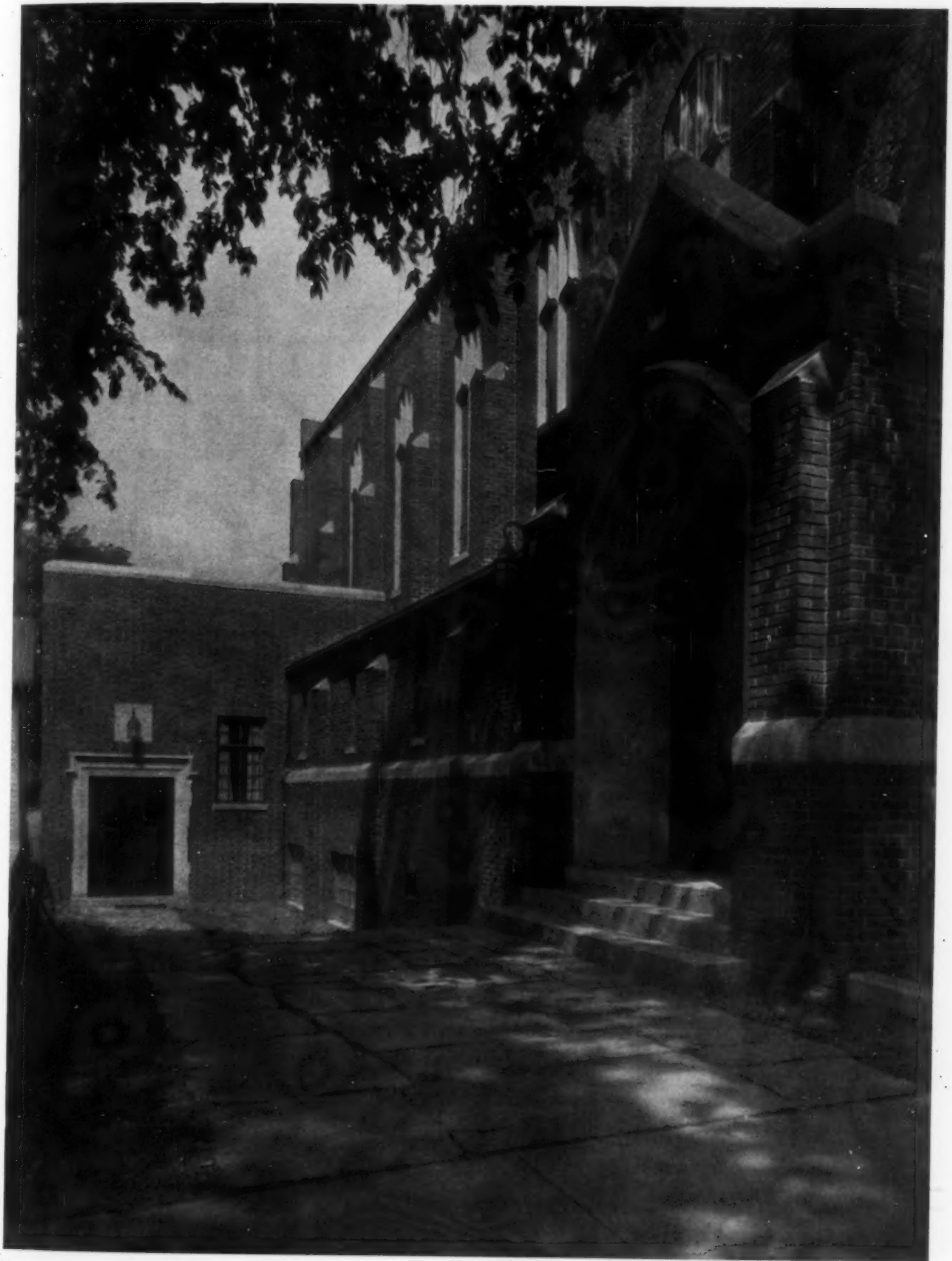
MAIN FLOOR



SCALE OF FEET  
0 5 10 20 30 40

BASEMENT

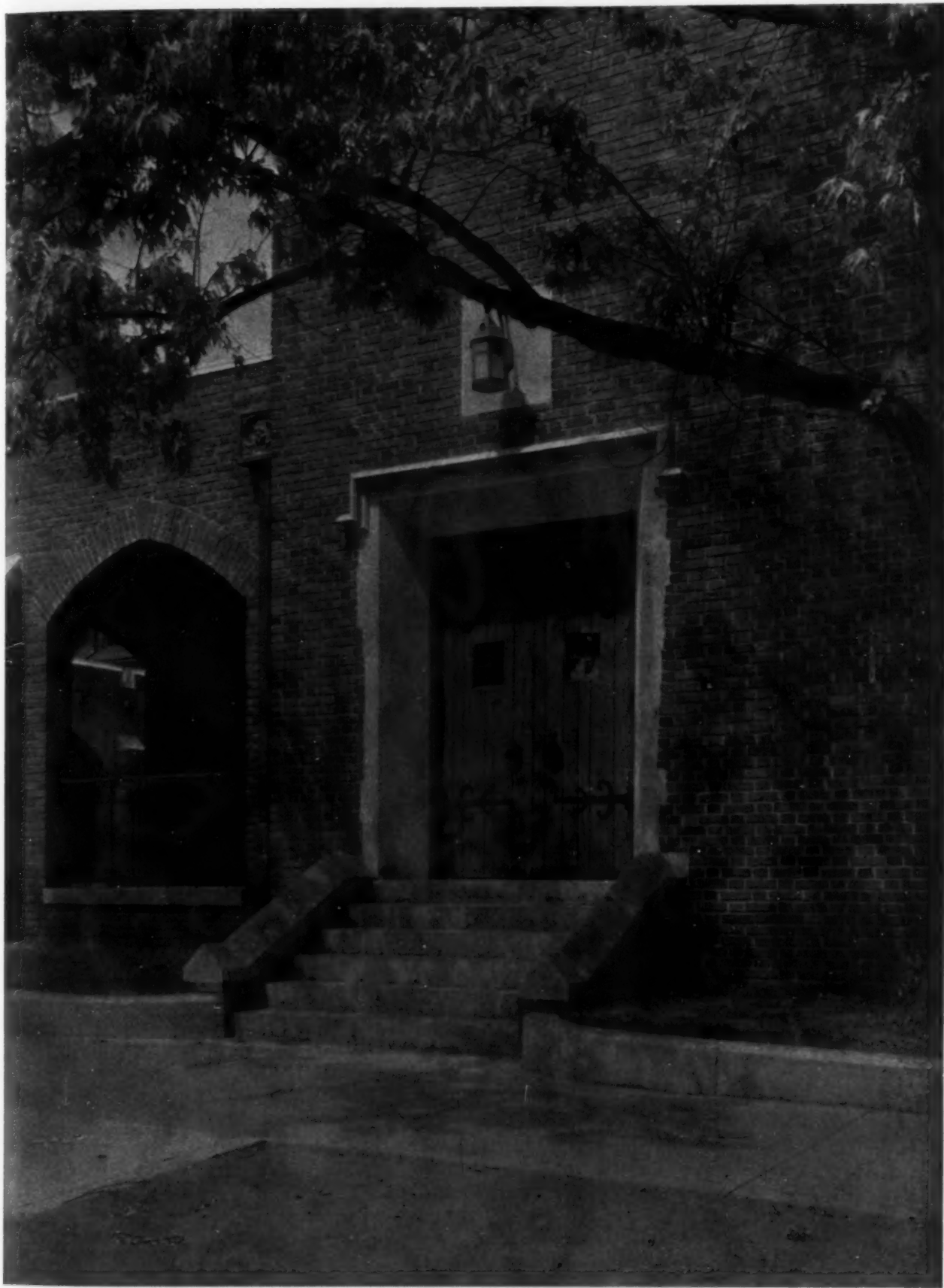
PLANS, WESTMINSTER PRESBYTERIAN CHURCH, LYNCHBURG, VA.  
CLARK & CROWE, ARCHITECTS



ENTRANCE  
WESTMINSTER PRESBYTERIAN CHURCH, LYNCHBURG, VA.  
CLARK & CROWE, ARCHITECTS

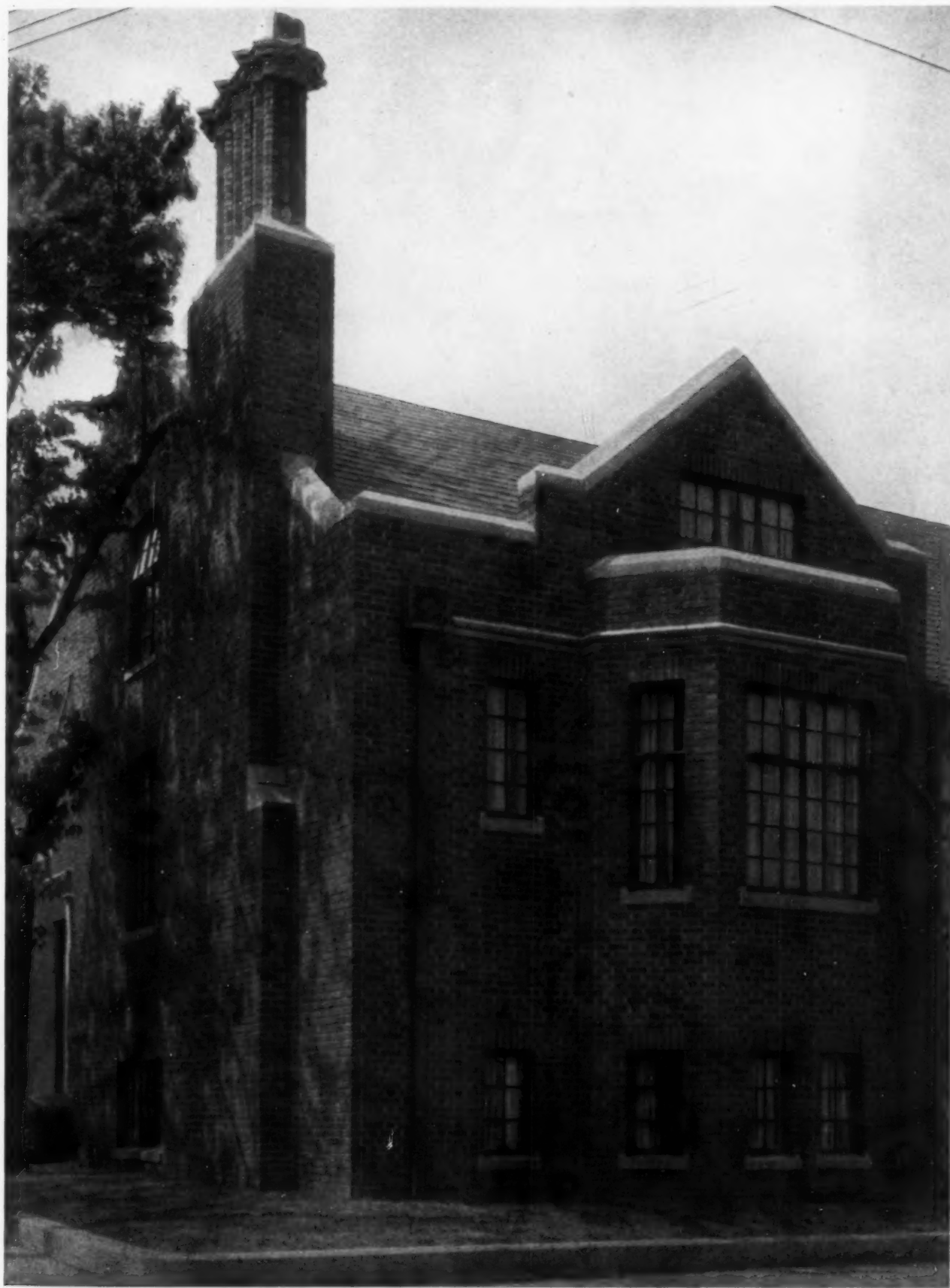






ENTRANCE TO SUNDAY SCHOOL  
WESTMINSTER PRESBYTERIAN CHURCH, LYNCHBURG, VA.  
CLARK & CROWE, ARCHITECTS

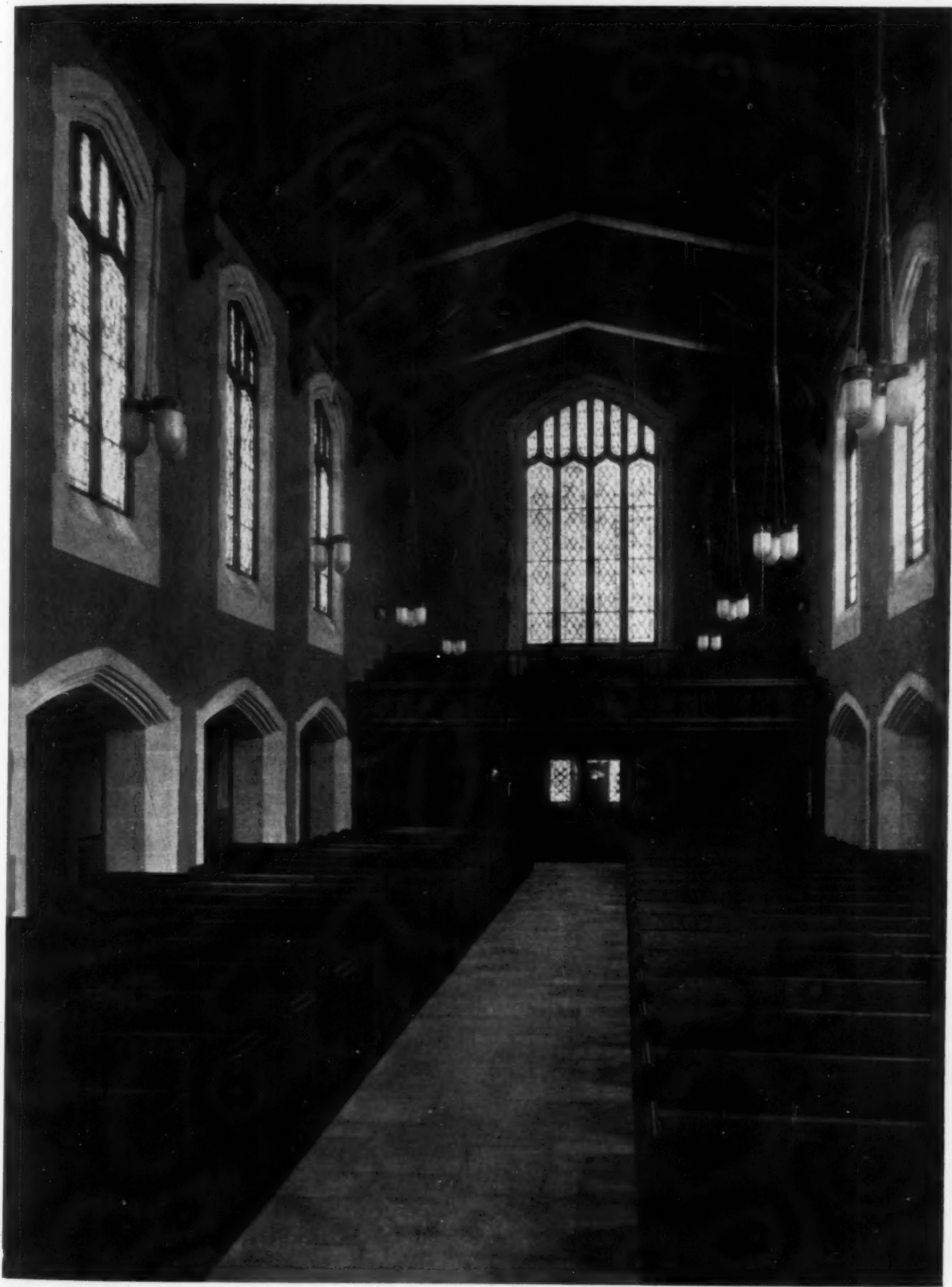




SUNDAY SCHOOL  
WESTMINSTER PRESBYTERIAN CHURCH, LYNCHBURG, VA.  
CLARK & CROWE, ARCHITECTS



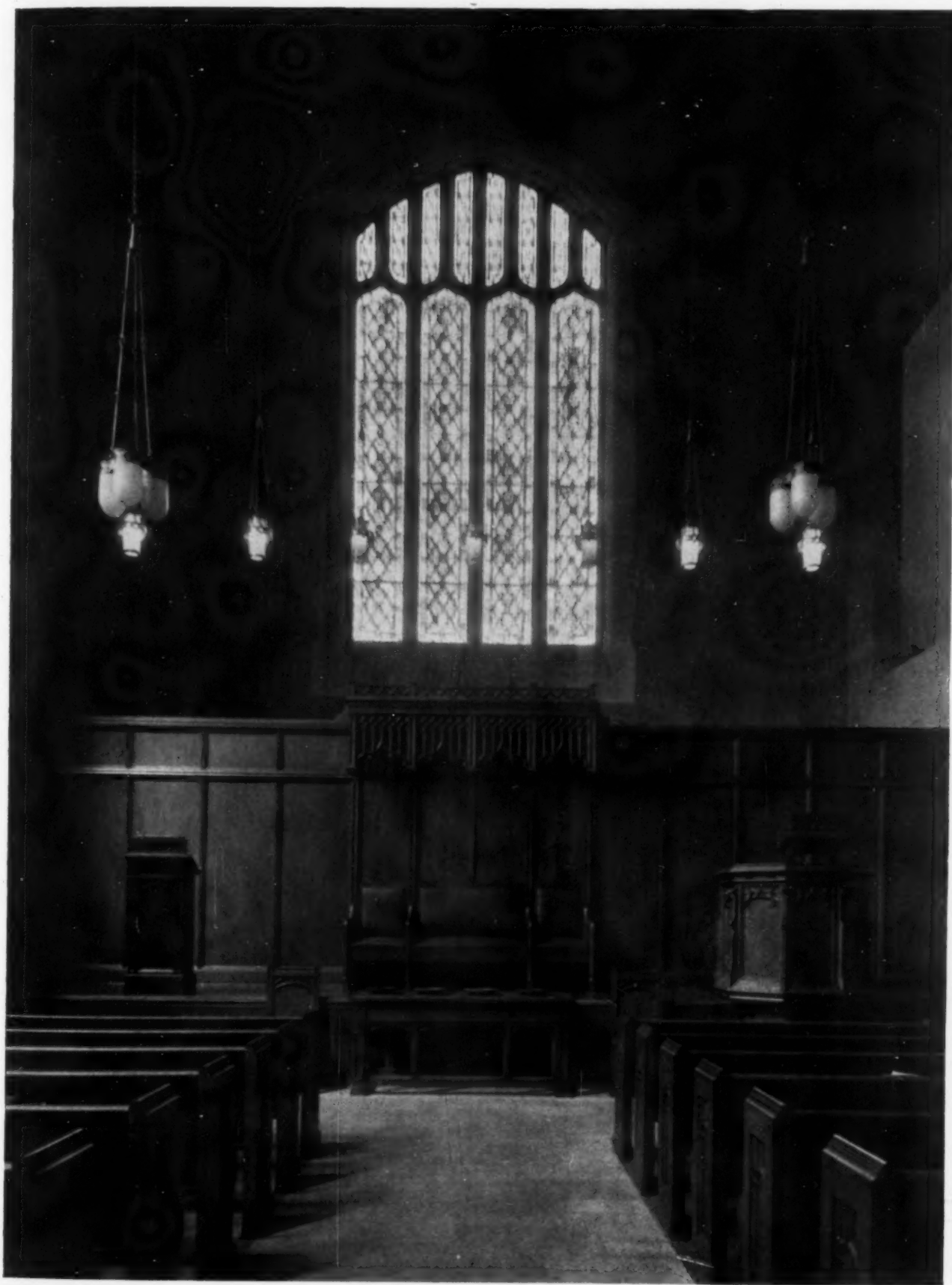




NAVE, FROM THE CHANCEL  
WESTMINSTER PRESBYTERIAN CHURCH, LYNCHBURG, VA.  
CLARK & CROWE, ARCHITECTS

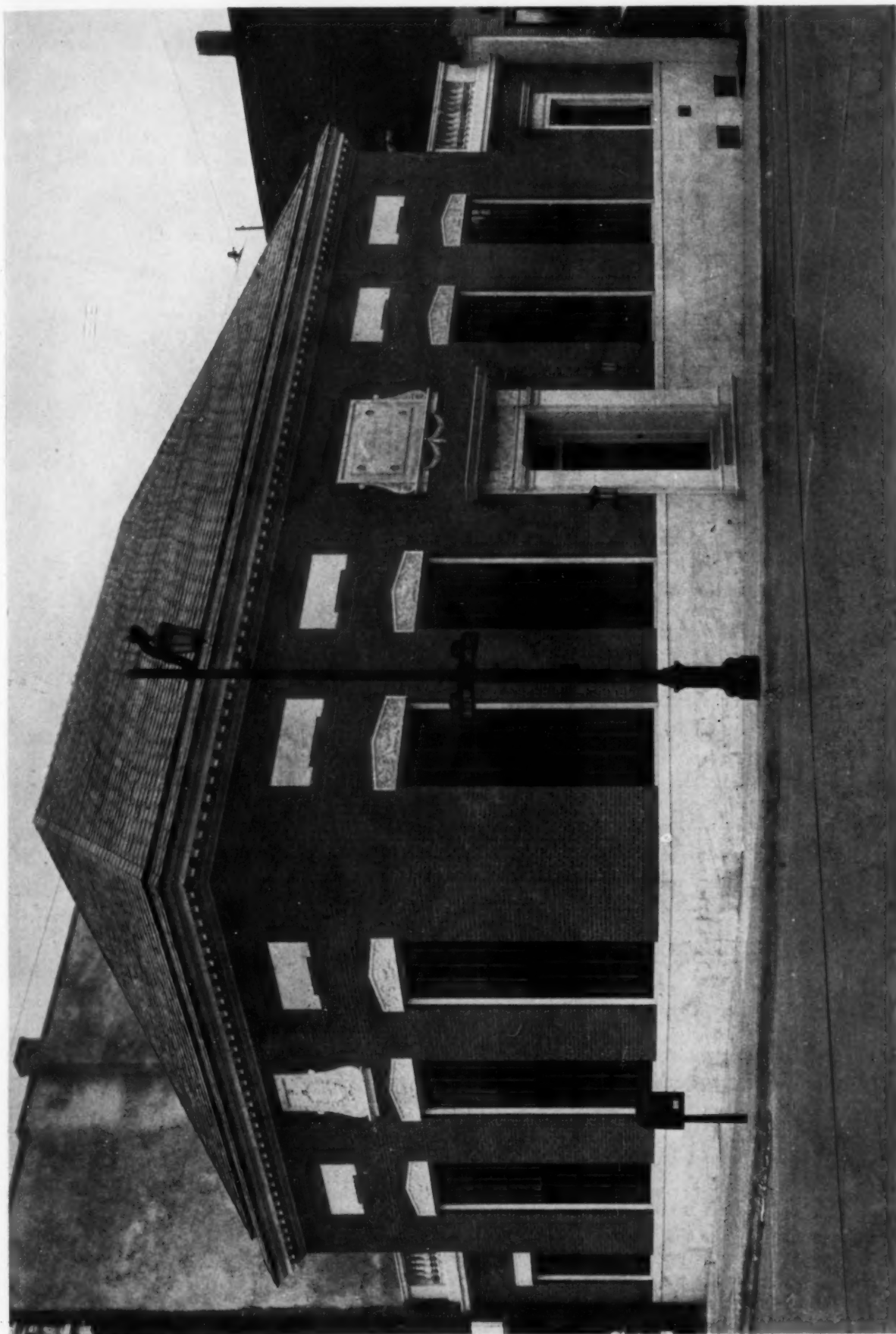






PULPIT AND ORGAN GALLERY  
WESTMINSTER PRESBYTERIAN CHURCH, LYNCHBURG, VA.  
CLARK & CROWE, ARCHITECTS

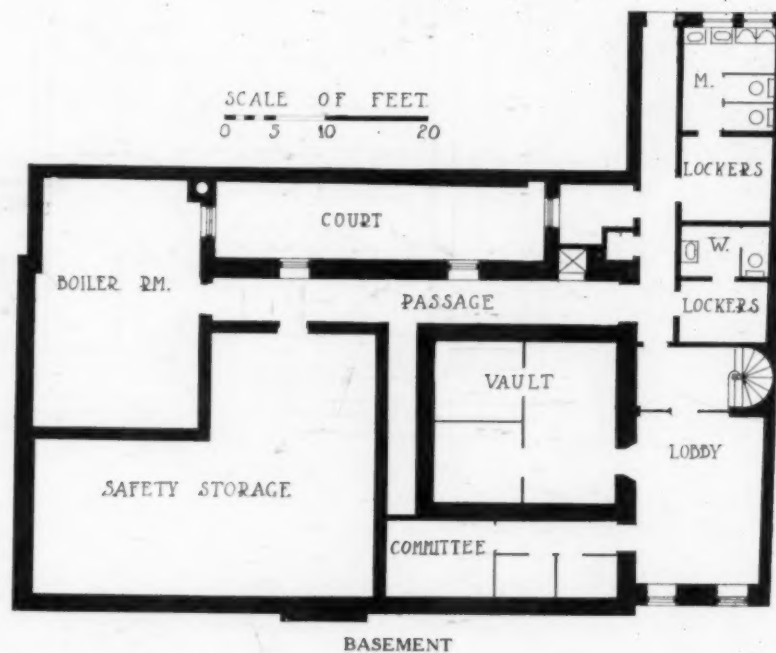
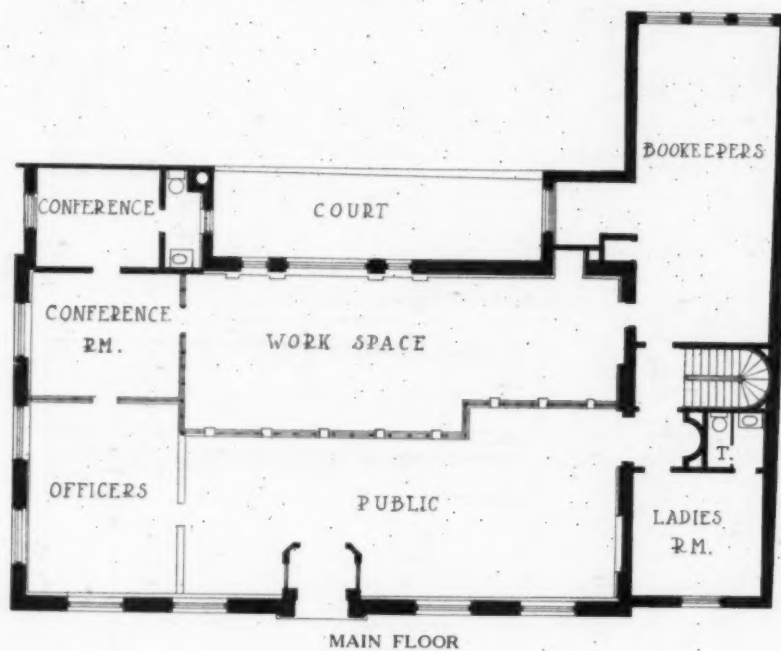




*Plans on Back*

BURLINGTON TRUST CO., BURLINGTON, VT.  
JAMES W. O'CONNOR, ARCHITECT



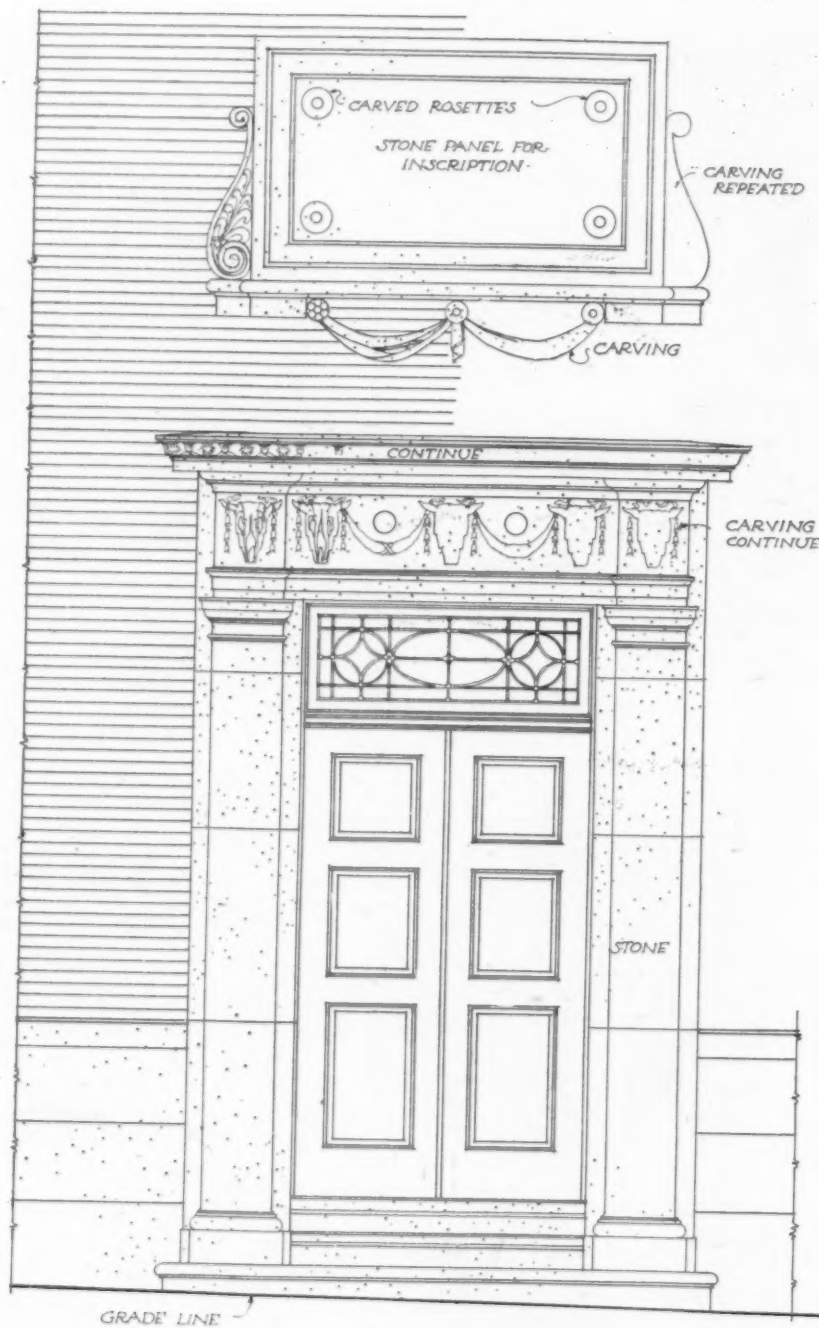


PLANS, BURLINGTON TRUST CO., BURLINGTON, VT.  
JAMES W. O'CONNOR, ARCHITECT

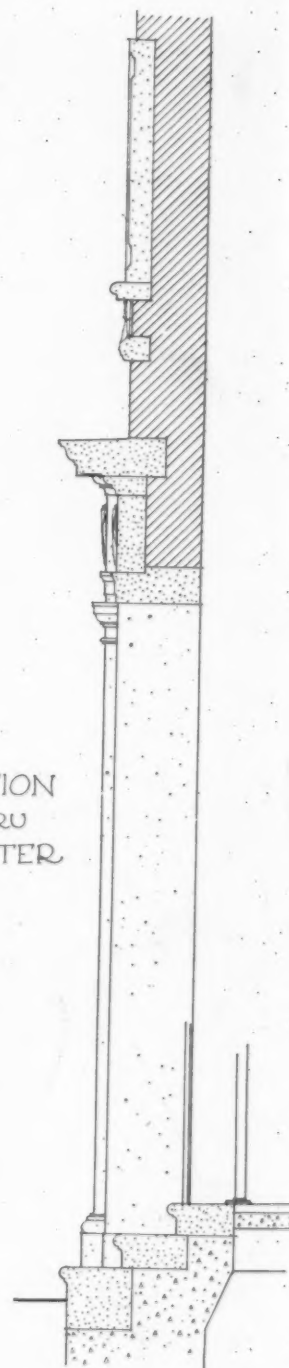


ENTRANCE  
BURLINGTON TRUST CO., BURLINGTON, VT.  
JAMES W. O'CONNOR, ARCHITECT

*Detail on Back*



SECTION  
THRU  
CENTER



ELEVATION

DOORWAY DETAIL

OCT.  
1927

SCALE IN FEET



No.  
41

The ARCHITECTURAL FORUM DETAILS



# Old Philadelphia Interpreted Anew

By MARGARET L. LAW

JANGLE of traffic and the strident notes of siren and horns; the never-ceasing thud of passing footsteps; modernity in all its ugliness and its endless hurly-burly;—then quite unexpectedly one comes upon a simple, red brick building whose dignity and repose bespeak "other days, other ways." As one crosses the threshold, one shakes from the feet the dust of city streets. The clatter of the market place is left behind, and the visitor feels himself back in the peaceful atmosphere of the eighteenth century Quaker City. Only here the time-revered Georgian architecture is used with peculiarly modern purpose. The building is not a town residence of the seventeen-eighties, but a bank whose function it is to meet today's needs—the Mid-City Office of the Provident Trust Company of Philadelphia, near the city's center.

At present American architecture, for both our homes and public buildings, holds a firm thumb-grip on the public's pulse and follows the vagaries of changing taste with alarming speed from season to season, perpetually re-incarnating itself in new guises. Many architectural styles, polygot in origin and difficult to understand, come and go like passing shadows on a screen. Byzantine and all the "Latins,"—French, Italian, and now particularly Spanish,—have their day; Gothic and High Renaissance, Lombardine and other styles unsuited for expressing the American temperament or for meeting our needs are hurled together in a bewildering hodge-podge;—one motif snatched from one period and nation, another detail adapted feverishly from something centuries and miles away in meaning. Hurling into the melting pot is such a jumble of ideas that the eye of the bewildered beholder can scarcely find a solution to the puzzle, and much less determine what really "expresses America."

Here, then, in this re-interpretation of the forms sponsored by our own colonial ancestors, there is a pleasing sense of stability. Here are welcome austerity, simplicity, freedom from the ornate, and from the strain after "originality of style." A familiar alphabet spells something new in purpose, but the



Mid-City Office of Provident Trust Company, Philadelphia  
Carl A. Ziegler, Architect

language is strange to us. Moreover, since we are persistently told that America's dominant life today is her business life, why should not American tradition be interpreted in this architecture of big business with a peculiarly constructive value?

Difficult indeed is this achievement of a sense of permanency combined with the elasticity which bank planning today demands. A few decades ago it was comparatively simple; then deposits of twenty millions meant a huge bank. Even two decades ago the half-billion, which forms the deposits of a large bank today, sounded like a fantastic dream to both banker and architect. Telephone, typewriter and the Federal Reserve System have revolutionized the banking business and, accordingly, the architecture which expresses it. In 1900 there were three clearly defined types of banks:—commercial banks, savings banks, and trust companies. Now national banks have opened trust and savings departments; trust companies handle commercial accounts; and each type has established numerous branches. Savings banks have taken over other savings

banks as branches. The fact remains that the bank is the servant of commerce and industry and the guardian of the people's wealth, and so it must possess every device for giving the maximum of intelligent and responsive service. Philip Sawyer, of the firm of York & Sawyer, architects of New York's Federal Reserve Bank, the Bowery Savings Bank, and numerous other great American bank buildings, says on this subject: "All that one can be sure of is that a modern bank is a living, growing organism, extremely sensitive to general conditions in this country and the world, to every change in the banking system, or to the new laws which may at any time modify its procedure, and that any shell intended to house it will be satisfactory only in proportion as it allows of the easiest modification of practice and arrangement." Such is the opinion of today's expert in building banks.

In marked contrast stand the Victorian reverence for dinginess in banks and the homage paid to the established form, however musty and ill-favored.



Entrance, Exterior

Agnes Repplier, in "Banks and Banking," writes most amusingly of this. She says: "A good many years ago I had the pleasure of seeing a great spectacular melodrama at Drury Lane (its name was

'Cheer! Boys, Cheer!' and it was one of the best of its kind), and the incident which most amused the house was the determination of a rich Australian to withdraw her account from the Bank of England because it was so dirty. She argued that an institution which would not clean itself up was no fit place for a woman's money; whereas the audience, being English, felt with all its soul that dinginess was the hallmark of conservatism. Every inch of grime on the face of a national bank was an added guarantee of its security. This is a familiar note in the literature of England. When Trollope wants to emphasize the authority of a very learned counsel, like Mr. Dove in 'The Eustace Diamonds,' he takes pains to lodge him in dim and dusty chambers. When Dickens wants to satirize the gullibility of the British public he paints in fantastic phrase the splendors which deceive them. The massive marbles and shimmering plate glass of the Anglo-Bengalee Loan and Life Insurance Company in 'Martin Chuzzlewit' stand for bankruptcy. The very clock and coal scuttles, the lettering of the circulars and the buttons on the porters' waistcoats shriek their warnings to the wise. A somewhat similar prejudice in favor of dirt and discomfort was not unknown to Americans a generation ago. Business of vast importance was transacted in offices austerly devoid of ease. Now 'the old order changes,' and the new order is becoming constantly more in accord with the dominant impulses of the age."

The sequel to what Miss Repplier writes is that the Bank of England has at last taken the drastic step and is being remodeled. Its architect recently



Banking Room, Provident Trust Company, Philadelphia  
Carl A. Ziegler, Architect

came to this country to study the solutions that some of our large bank buildings offer to the problems of the moment. After a month he decided to stay for two months, and then declared his intention of destroying all the plans made during the past two years and beginning afresh upon a wholly new basis. Gone, indeed, is the day when power imposed itself through dinginess and when ugliness possessed financial value.

Here in the Provident Trust Company's branch office, this cleanest and newest of buildings, designed by Carl A. Ziegler, the ivory-toned woodwork and indirect ceiling lights give the effect of a country house flooded with sunshine. Cream colored walls and neutral floor coverings rest the wearied eye, and it seems that there has been exercised architectural and decorative restraint, with a freedom from ornamentation and an achieved simplicity. Over the teller's windows is the familiar classical cornice, and between them are simple fluted columns. Doorways, windows and minor architectural details are copied from historic buildings of eighteenth century Philadelphia. For instance, the exterior of the first floor of the building is almost entirely a reproduction of the Palladian window end of old Christ Church. The brick of which the structure is built, dull toned and weathered, are the same as those used in restoring the time-hallowed walls about Independence Square. The officers' desks reproduce the "signers' desk" now in Independence Hall. The customers' desks are modeled after one used by Thomas Jefferson and are of truly Jeffersonian simplicity. It became necessary to have a still smaller desk, so the old clerk's desk in



Entrance, Interior

Independence Hall was copied. Grandfathers' clocks mark the hours and play their part in relieving the modern sense of pressure and speed. On the walls hang a few silhouettes and old prints. A consulta-



Banking Space, Provident Trust Company, Philadelphia  
Carl A. Ziegler, Architect



tion room for customers is furnished in maple furniture of the Pilgrim century, and in the women's room "antique-ing" is indeed carried delightfully into the realm of business. It is said that votes for women have caused the polling places to be scrubbed and swept and garnished,—literally if not figuratively. Truly women have forever and a day been the world's housekeepers. Can it be that the yearly increasing number of business women, and the increasing familiarity of the average woman with business affairs have wrought a change in the housing of business? So changes in architecture would suggest.

Be that as it may, when one sits on a Hepplewhite chair and writes on a finely inlaid secretary,—a naturalized piece from old England,—the psychological effect is certain; business becomes a pleasure. Two Chippendale mirrors with finely carved frames reflect the patterns of old chintzes. On cold winter days the Venetian blinds are drawn, while logs crackle and flame on old andirons. A Terry clock stands sentinel

on the simple mantel, and a Sheraton sofa is drawn conveniently close to the fireside. On the walls hang samplers and old prints, among them a Birch print of William Penn's home, "Solitude." There are vases of deep blue larkspur that look fresh from some old fashioned garden, and to complete the picture there are two diminutive chairs by the fireside, chairs on which wee folk of bygone days have sat and kicked their heels. Slight wonder, then, that Joseph Pennell, arch-critic of the beautiful and himself an apostle of the "wonder of work," exclaimed on entering this room that he felt carried back to the Pine Street home of an old aunt, where he spent happy childhood hours.

As one leaves these quiet rooms and returns again to the modern hurly-burly, it is with a sense that an organization so finely attuned to the best of the past must have much to offer for the present and the future. With Rudyard Kipling, one feels that: "The things that truly last, when men and times have passed, They are all in Pennsylvania this morning."



Consultation Room, Provident Trust Company, Philadelphia  
Carl A. Ziegler, Architect

# THE ARCHITECTS' FORUM

## The Housing Problem in New York

By AYMAR EMBURY II

THE housing problem in New York is in many ways similar to that in other cities of the country, although by reason of the greater population of New York and the peculiar geographical formation of the city it is here in some respects more difficult of solution. Its cause is easily understood, since the economic difficulty at the root of the housing question is comparatively simple. It no longer pays to build tenement houses, because the wages in the building trades have advanced so much faster than those in other industries that the cost of construction is today so high that it is practically impossible to give adequate accommodations at prices within the ability of the average of our citizens to pay. It is not a question of excessive rentals; many years ago, at the time the tenement house laws were so drastically revised, the owners of buildings were getting rich on the poorest class of occupancy. Today returns in excess of from 6 to 8 per cent net are possible only on new apartment buildings of the class with rentals of from \$25 to \$30 per room per month or more, and the tenements or apartments which are considered "low priced" are renting at from \$15 to \$18 per room per month. Four rooms, that is a living room, kitchen and two bedrooms, are certainly the minimum accommodation for the average American family of five, and yet assuming this minimum and assuming that the family is willing and able to walk up to the sixth story, about the least at which this space can be procured in New York is \$60 a month, and rooms at even this price can only be secured in the outlying districts of the city, where land values are not in excess of from \$10 to \$12 a square foot, for land values figure largely in the equation.

It is universally recognized that this situation is intolerable, and there have been proposed a number of methods of ameliorating it, of which the most promising is some sort of semi-charitable organization for the construction of low-renting tenement or apartment houses which shall be tax-free if the return on the investment is restricted to 6 per cent. It may be added that this is the only method suggested which offers a real prospect for success, but that this does offer such a prospect in uncontrovertible if a sufficient number of buildings are erected. The tax rate in New York is approximately 3 per cent of the assessed valuation, and the assessed valuation is kept as near the actual sales value of the property as the assessors can make it. Since the average net return on apartments renting at from \$15 to \$18 is somewhere in the neighborhood of 8 per cent, it would seem quite within reason that a company limited to

6 per cent return, and being tax-exempt, might be able to rent apartments for \$12 per room per month or less. On the other hand, it is, to the writer at least, doubtful that such a solution in the long run would be wise. It cannot be expected that private enterprises with a limited return will be able to accommodate with homes all the people who literally cannot afford to pay more than \$12 a room a month, and the construction of a limited number of such apartments is likely to discourage construction of purely commercial apartments or tenements intended to take care of the very class of people who need the lowest rentals. Also, since the real estate taxes in New York are already distressingly heavy, as expenses of administration increase with the population, the proportionate share of the taxation borne by the commercial tenement house will be increased, and the rents raised still further, because ultimately taxes are paid by the lessee and not by the lessor. This will result in further crowding of people into inadequate space, except the fortunate few who are able to rent in the state-aided, tax-exempt structures which are built.

There is certainly something fundamentally wrong in a civilization which does not automatically provide for its people; and the attempt to provide by arbitrary means, i. e. by state aid, for that proportion of the population which cannot otherwise live, is much more likely to be a step in the wrong direction than in the right. It will be recalled that in Rome, in the first century of our era, the population was so far in excess of the demand for labor that a large percentage of it was fed, housed, and even amused at the public expense. It is perfectly evident to us now that the Roman problem would have been far better solved by driving the people out of cities to places where they could make a living,—driving them out by starvation if necessary,—than by assisting in their support. It is not to be assumed that the Roman populace which got its bread and wine free was entirely composed of loafers and bums; more likely by far the great majority was of men who actually worked, but who did not receive enough for their labor to support themselves. There are actually many industries which could be conducted as well outside the city as in it, and with a result that would be economically far better in every respect. It was not so many years ago that most of the men's ready-made clothing in the United States was made here in New York,—if not all, at least a very large part; today it is said that the little city of Rochester manufactures more men's ready-made clothing than New York, and the companies in Rochester are making as much money



as they were here in New York, and their operatives are better housed, better fed, and better clothed than they would be here at any competitive wage.

The surveys made from time to time show that the number of rooms occupied for living purposes in New York has increased at only about a quarter of the rate of the population in the last 15 years. This does not, of course, mean that four people are living in every room where one lived before, but it does mean that a very considerable number of obsolete buildings are still being used for living purposes or have been altered to accommodate more people than was the intention of the original builders. Many of these houses are occupied in violation, if not of the letter, at least of the spirit of the tenement house law, and in further violation a considerable number of so-called "apartment hotels" have been erected, occupied mainly by well-to-do people, not overcrowded, perfectly sanitary, and generally with healthful living conditions, but which are in fact, if not in name, tenement houses and which violate in many respects the tenement house code now in effect.

Now it is assumed that most of us are sincerely anxious to commit no act, legal or illegal, which is opposed to sound public policy and to the health and well being of us all. There are, of course, a certain number of people who will do anything that is legal, provided there is money in it, and a somewhat smaller class who will do anything illegal if they can get away with it and profit by it financially. Both of these classes have been very active in tenement house construction here in New York, and while the architect is not legally responsible for their activities and is not often called upon to advise as to wise economic courses, he should be a leader in calling to the attention of the public what is and what is not for the ultimate good,—and endeavor to guide his clients along the best lines. That the tenement house law should be changed in certain respects is probably true. Certain of the provisions which were essential when made are today unnecessary or impractical. For example, the provision that a stairway shall have exterior light means that one room on each floor is eliminated to permit the installation of this stairway; yet it is probable that in any nine- or ten-story building the stairs have never been used by one of the tenants above the second floor, and it is unlikely that they have been used even there. In many cases tenants are ignorant of the very locations of the staircases, and there seems to be no practical reason for the continuance of the provision that they shall have outside light. Properly constructed fire towers are at least as safe without outside light, and the ventilation of such stairways can be assured by a provision in the code requiring them to be open to the air at top and bottom. Similar arrangements should be made in

regard to toilets and bathrooms. The modern system of ventilation of inside bathrooms makes these perfectly sanitary, and placing them inside would in many cases save one or two rooms; these two provisions alone would add at least one room per apartment on any floor, decreasing the cost of construction per room about 10 per cent. On the other hand, those provisions of the tenement house code which apply especially to height, should, because of the transportation problem, be retained or even made more stringent. The tenement house law which prohibits more than 15 stories on a 100-foot street, and more than ten stories on a 60-foot street is certainly sufficient, and if profitable buildings cannot be built under these conditions, they should not be built at all.

An adequate and satisfactory solution of the housing problem does not, therefore, appear to be in sight, and it is the opinion of the writer at least that the state-aided buildings do not offer even a palliative measure. The reduction in the wages in the building trades would permit more economical housing, but it is doubtful if this is economically desirable, and practically its possibility is remote. The extension of transportation facilities to cheap land may temporarily relieve the situation, at least to some extent, but long rides in the crowded subways mean that the workers spend on trains in bad air and no light time that should be devoted to rest and recreation. Nor does there seem to be any possibility of providing adequate transit facilities except at a higher fare or by state aid, and state aid means always an aggravation of the conditions it is intended to relieve. Certain changes in the tenement house law may help, but a complete rewriting of the tenement house law to meet the needs of the city today would probably result in an increase in the cost of building rather than in the lowering of it. The one real solution seems to be the removal to places outside the city of all those industries which can possibly operate elsewhere. We have in this country a senseless admiration for size;—we want New York to be the largest city in the world. A less admirable standard of excellence could hardly be imagined. If we should want New York to be the most comfortable city in the world to live in, that in which every inhabitant has a maximum of light, and air, and play, the best food, and the most comfortable clothing, we should be heading toward a real ideal; but that ideal can be attained only by increasing the wages of the laborers, or by their removal to other districts in which lower wages will buy more. Since we here in New York are manufacturing most articles in competition with communities in which the prices are lower, a general increase in wages is hardly to be hoped for. The only solution of the problem appears to be in lessening the demand and not in increasing the supply.



# The Proof of the Pudding

By C. STANLEY TAYLOR

NOT long ago there was brought forcibly to my attention the most convincing evidence I have yet encountered as to the direct business value of good architectural service. It was so sensible a tribute to modern practice and so indicative of a powerful trend which has marked the progress of building during the past few years, that it merits serious thought on the part of every architect.

There has been, and probably always will be, considerable discussion as to the economic value of architectural service. There has been some criticism of the architect as a business man. This has been due, in part, to the fact that some architects have designed buildings which have proved unsuccessful from the investment standpoint because of wasteful and inefficient planning, or because of the unwise specifying of materials and equipment which have not shown a reasonable length of useful life. However, the real question of the economic value of good architectural service is best answered by considering each annual quota of new buildings as a whole and interpreting the averages of improvement or retrogression. Where are the facts and figures to prove our belief that each year architects and engineers are rendering greater and more valuable service and developing a more important position in the economic structure of this country? To my mind this proof is to be found primarily in the ledgers of building owners and in the records of transactions in the field of building finance. This would be most convincing proof.

The convincing proof just mentioned developed at a luncheon meeting with the head of one of the largest real estate appraisal and mortgage financing organizations operating in this country. He was accompanied by a building expert whose function for that company is the analysis of specifications and the actual checking of the construction of large projects on which building and permanent loans are made. It was very interesting to learn from them not only the importance of efficient planning as a factor in building valuation, but also the actual attitude toward the specifying of good materials and equipment which should serve to give longer useful life to the buildings and, incidentally, to reduce materially the annual charges of depreciation and maintenance. We had just returned from a typical visit of inspection, covering an important building project which is now well under way, and we were well provided with concrete examples for the discussion which ensued. The information which developed, briefly expressed, was this: (1) That compared with the average building of 10 or 15 years ago, our modern commercial and institutional structures have had their estimated useful lives increased by at least 50 per cent. (2) That mortgage loans on such building operations are now safely extended over a considerably longer period of

years with much less drastic amortization clauses. (3) That the annual depreciation or obsolescence factor for good buildings has been extended to cover a period of 70 years, where its average in times past was but from 40 to 50 years. (4) That maintenance and repair costs in proportion to gross income have shrunk materially in average experience. (5) That the actual architectural and engineering designing of modern buildings has so improved that there is relatively little danger of a building's becoming either aesthetically or mechanically old fashioned within the period of its useful life. This was certainly valuable evidence, coming from an organization which has observed building methods closely for many years. It indicates a tremendous improvement in methods of design and construction, and the important point is that, for this definite economic progress, the credit was given to architects and engineers who have created the demand for good materials and equipment. Full credit was also given to the manufacturing branch of the building industry, which has unhesitatingly met this demand by achieving and by maintaining that high standard of integrity and service which is reflected in the materials and equipment.

The profession lives today in an interesting era of new and daring expression. Restrictive conditions of land values, zoning laws, and building codes have, to a great extent, served an unexpected but valuable purpose by stimulating the inventive genius of the architect of today. The result is being shown in a constantly mounting number of structures of outstanding importance, many of which in design are uniquely adapted to their purposes. The eternal triangle in modern practice is formed by the interrelation of exterior design, of plan, and of specifications, all in their modern sense. Each must be considered as a primary factor of great importance. The exterior design must be thoroughly adapted to the environment and to local conditions; the plan must be completely efficient according to the functional demands of the building and conditions which affect the annual rental income; the specifications must call for the better types of materials and equipment, all of which may be expected to function efficiently during the life of the building. If any one of these is slighted, —and particularly that which has to do with the hidden parts of the building, such as structural members, piping, wiring and others similarly difficult to replace,—it is obvious that a weak link has been placed in a chain which would otherwise be strong.

It is the architect's task, and often a difficult task, to "sell" his client the idea of protecting his original investment by the use of quality materials, making up for apparently additional cost by the savings made in reduced maintenance and depreciation costs and increases in the factors of area, utility and marketability.

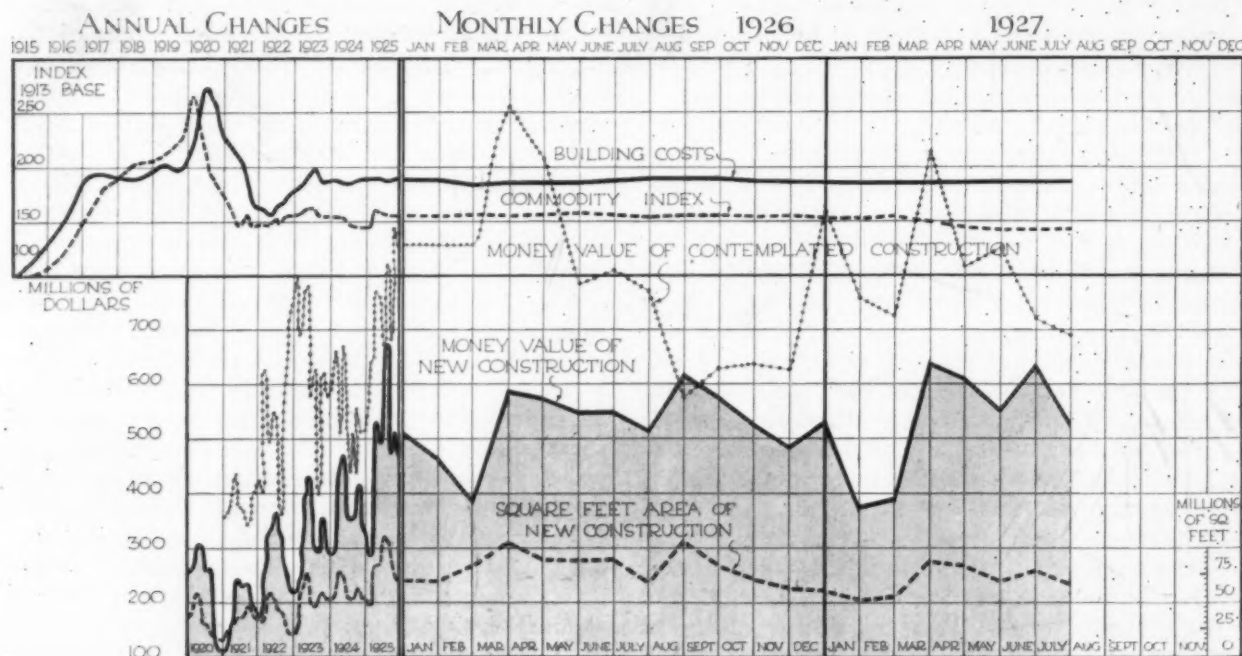
# THE BUILDING SITUATION

## A MONTHLY REVIEW OF COSTS AND CONDITIONS

WITH the June contract figures, as reported by the F. W. Dodge Corporation, the total building activity of the first half of 1927 was brought up to equal the total for the earlier half of 1926. In view of this fact, it was interesting to see the recording of a July contract total larger than the figure for July of last year and indicating a continuation of confidence in the building industry, which may result in the 1927 totals' equaling those of last year. It is to be realized, however, that public works and utilities have contributed very largely this year to the maintenance of the contract total, and with this thought in mind it is quite probable that the end of this year will see a building total 10 or 12 per cent less than that of last year, all of which will be quite in accordance with THE ARCHITECTURAL FORUM's forecast made in January, 1927. A significant factor in the June and July figures is a strong upturning of residential building, which has been gradually declining for some time and which in a sense is a leading indicator of actual conditions of prosperity in the building industry. To further strengthen the idea that the latter half of this year will not equal the same period of last year in the letting of actual building contracts, there are to be

noted the facts that the filing of building permits has been less active for the past two or three months, and also that the filing of plans showed some decline in June as compared with June of last year, although the July filing was heavier than that of last year.

An examination of the chart given here shows an interesting continuation of contract-letting during the months of June and July as compared with June and July of 1926. While increased activity in engineering projects is primarily responsible for this, it is of course true that such projects present a large outlet for basic structural materials. The general economic conditions which sustain building activity are very good. Financial support for building operations is readily forthcoming, and in fact is quite liberal when plans are efficient and specifications are good. It is realized, of course, that many new buildings will soon enter a much more highly competitive market, and for this reason the building loan interests are more and more insisting on better architectural design and construction and equipment which will meet the tests of public favor and low maintenance and depreciation costs. It is probably for this reason that today a higher percentage of all building construction is being designed by architects than at any time in the past.



THESE various important factors of change in the building situation are recorded in the chart given here: (1) *Building Costs*. This includes the cost of labor and materials; the index point is a composite of all available reports in basic materials and labor costs under national averages. (2) *Commodity Index*. Index figure determined by the United States Department of Labor. (3) *Money Value of Contemplated Construction*. Value of building for which plans have been filed based on reports of the United States Chamber of Commerce, F. W. Dodge Corp., and *Engineering News-Record*. (4) *Money Value of New Construction*. Total valuation of all contracts actually let. The dollar scale is at the left of the chart in millions. (5) *Square Foot Area of New Construction*. The measured volume of new buildings. The square foot measure is at the right of the chart. The variation of distances between the value and volume lines represents a square foot cost which is determined, first by the trend of building costs, and second, by the quality of construction.



# SMALL BUILDINGS

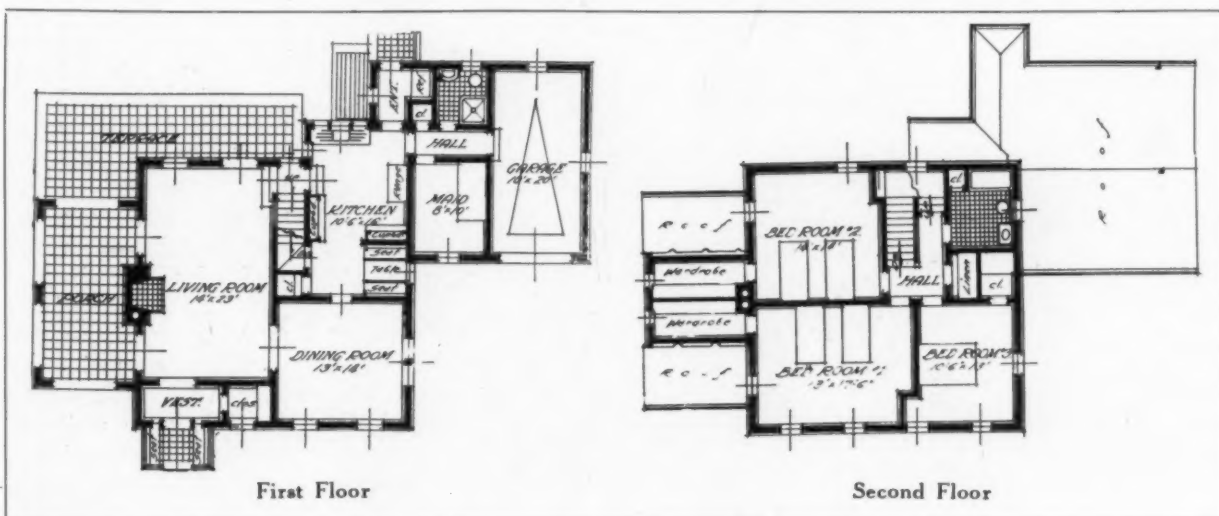


SMALL HOUSE, COLONIAL FARM HOUSE STYLE, GREENWICH, CONN.

R. C. HUNTER & BRO., ARCHITECTS

**T**HIS small house with attached garage carried out in wide siding painted white, with shutters and blinds painted green, possesses a hospitable, homelike effect, combined with convenience and com-

pactness of the plan. The steep pitch of the roof of the main structure is repeated in the roof of the living porch. Opening off the small vestibule which separates the front door from the living room is a large





## FORUM SPECIFICATION AND DATA SHEET—198

Small House, Colonial Farm House Style, Greenwich, Conn.; R. C. Hunter &amp; Bro., Architects

## OUTLINE SPECIFICATIONS

## GENERAL TYPE OF CONSTRUCTION:

Frame, studs and wood sheathing, wood lath and plaster.

## EXTERIOR MATERIALS:

Siding.

## ROOF:

Wood shingles.

## WINDOWS:

Double-hung wood sash.

## FLOORS:

Oak.

## HEATING:

Steam.

## PLUMBING:

Enameled fixtures.

## ELECTRICAL EQUIPMENT:

Lighting.

## INTERIOR MILLWORK:

Whitewood and birch.

## INTERIOR WALL FINISH:

Smooth, hard plaster.

## INTERIOR DECORATIVE TREATMENT:

Walls painted and papered; floors stained.

## APPROXIMATE CUBIC FOOTAGE:

35,000.

## COST PER CUBIC FOOT:

44 cents.

## YEAR OF COMPLETION:

1925.

coat closet. The main stairway, which leads from one corner of the living room to the floor above, is equally accessible from the kitchen. The omission of a pantry between the kitchen and the dining room

seems rather unusual in a house where a room and bath are provided for a servant. Where a small house is designed to be run and cared for entirely by the mistress, which is often the case, there is little necessity for having what is

often called a "butler's" pantry, in valuable space.

On the second floor are three masters' bedrooms, a bath, and ample closet space. The high pitch of the roof over the living porch makes it possible to introduce two large wardrobe closets opening off the two principal bedrooms. The arrangement of four windows across the front of the second story unfortunately necessitates having a jog in the wall between the two front bedrooms, and another jog is required in the rear bedroom to obtain headroom for the stairway where it turns down to the living room. The living room and dining room, however, are pleasantly rectangular and devoid of all breaks and jogs. The exterior of this small house shows that consideration and study have been spent on the location, scale and proportioning of the window openings and other details.



Main Entrance

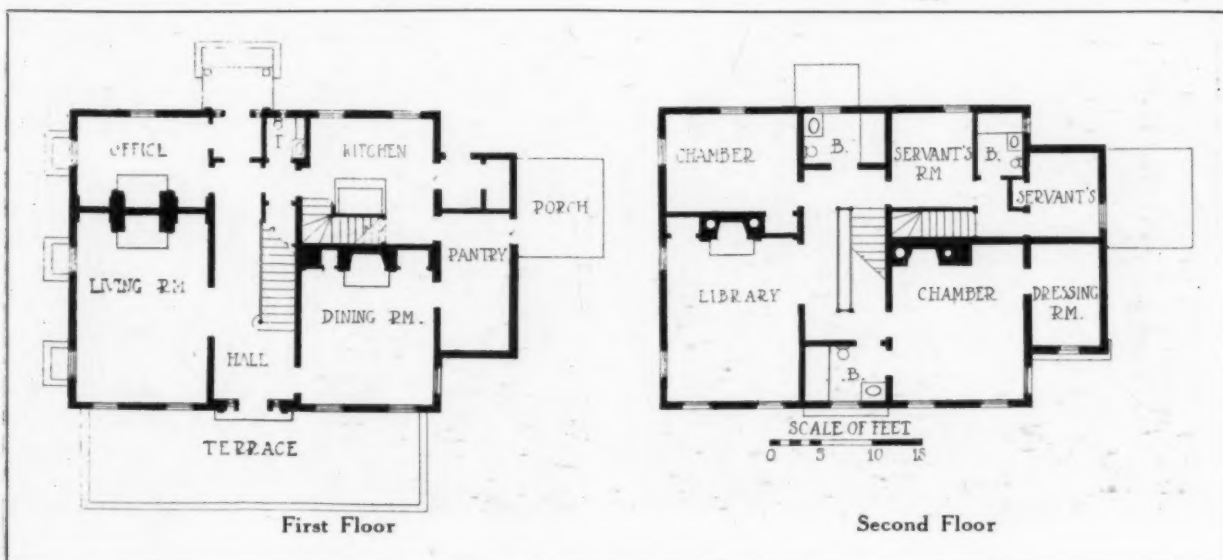


HOUSE OF PAUL DALY, ESQ., SOUTHPORT, CONN.

ROBERT J. REILEY, ARCHITECT

ALTHOUGH there are certain details and characteristics common to all farm houses built between 1730 and 1800, simplicity and refinement of detail are among the most noticeable; at the same time, a lack of symmetry in the exterior design, such as is found in this house at Southport, is not unusual. The picket fence is frequently found shutting off the front yard of the farm house itself from either a passing highroad or an entrance lane. These fences in many instances enclose the more or less formal

flower garden, protecting it from stray dogs and cattle. The detail of this picket fence and ornamental gateway is attractive and unusual. The size and scale of the windows and the window panes have been successfully studied out. From the point of view of design, the front elevation might perhaps possess greater dignity and repose had one instead of two windows been used upon the lower floor at the left of the front door. This is true also of the two chimneys, which are unfortunately and unevenly placed.



## FORUM SPECIFICATION AND DATA SHEET—199

House of Paul Daly, Esq., Southport, Conn.; Robert J. Reiley, Architect

## OUTLINE SPECIFICATIONS

## GENERAL TYPE OF CONSTRUCTION:

Frame.

## EXTERIOR MATERIALS:

Wood.

## ROOF:

Shingles.

## WINDOWS:

Double-hung.

## FLOORS:

Oak and pine.

## HEATING:

Steam and fireplaces.

## INTERIOR WALL FINISH:

Finished plaster and sand-finished plaster.

## INTERIOR DECORATIVE TREATMENT:

Sand-finished plaster and wallpaper.

## APPROXIMATE CUBIC FOOTAGE:

36,000.

## COST PER CUBIC FOOT:

49 cents.

## YEAR OF COMPLETION:

1925.

Inside chimneys have the advantage of providing spaces for closets and bookcases. Where a house is quite small, exterior chimneys make possible more area in the rooms and usually give a pleasing balance to the exterior design. Exterior chimneys if built of special brick, or even of common brick painted white, cost more than interior chimneys, which can be built of the commonest sort of brick and concealed behind the plaster walls. The delicacy of detail found in this entrance porch is repeated in the service porch, which opens out from the spacious pantry. As in most Colonial farm houses, the main hall runs the entire depth of the house. Here the garden front

is more formal and severe in character than the entrance front, although the same charm and refinement of detail are found in both of this building's facades.

The house is well planned, showing no waste space or ugly angles. Each of the four principal rooms on the first floor is perfectly rectangular, and the fireplaces, windows and doors are located symmetrically. This unusually well planned, convenient and comfortable house is sufficiently deep to permit of a small office being located directly back of the living room. This is an excellent arrangement for a house owned by a physician, lawyer, or farmer, as it gives the head of the house a room which is entirely for his own use.



Main Entrance

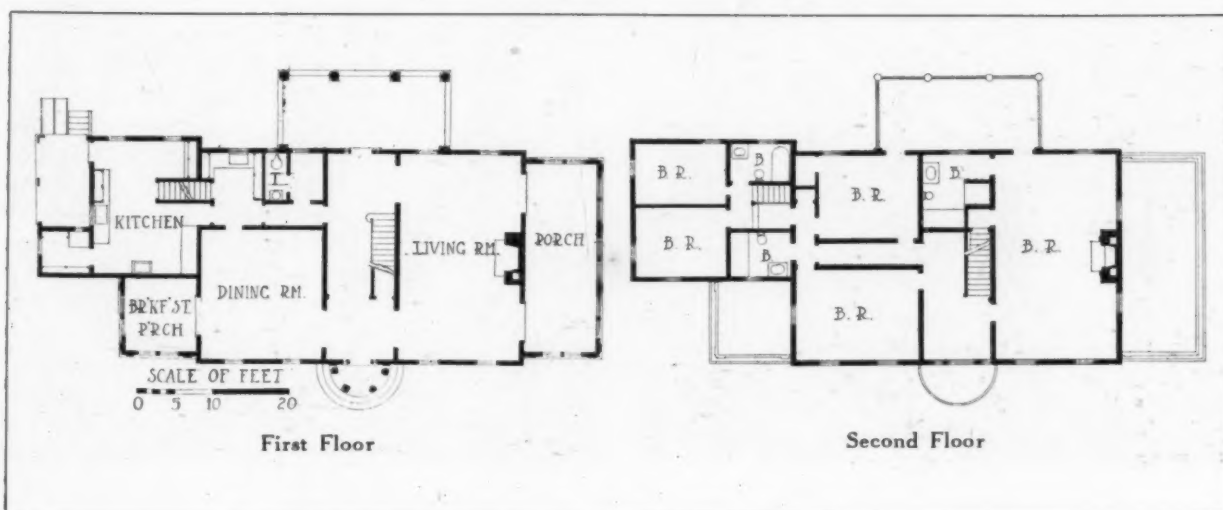


Garden Front





HOUSE OF H. E. PETTEE, ESQ., SARATOGA SPRINGS, N. Y.  
HOPKINS & DENTZ, ARCHITECTS -



## FORUM SPECIFICATION AND DATA SHEET—200

House of H. E. Pettee, Esq., Saratoga Springs, N. Y.; Hopkins &amp; Dentz, Architects

## OUTLINE SPECIFICATIONS

GENERAL TYPE OF CONSTRUCTION:  
Frame.EXTERIOR MATERIALS:  
Random width clapboards.ROOF:  
Shingles.WINDOWS:  
Double-hung.FLOORS:  
Oak.HEATING:  
Hot water.INTERIOR MILLWORK:  
White pine.INTERIOR WALL FINISH:  
Plaster, painted.APPROXIMATE CUBIC FOOTAGE:  
71,433.

NO more successful use of the Colonial style could be found than in this house at Saratoga. Tall elms and terraced lawns provide a perfect setting for this delightful, old time, white painted building, relieved by its green shutters and blinds. Except for the enclosed porch at either end of the main

house, it could easily be imagined that this is really an old homestead which has been renovated and restored. The unbroken roof and the end chimneys add much to the simplicity and balance of the design. The entrance porch, with its delicacy and refinement, might well have been found in Salem or Portsmouth.

Although the end chimneys prevent windows' centering in the gable ends of the house, a better balance might have been achieved had quarter-round instead of oblong windows been placed at the sides of the chimneys in the gable ends, windows with or without blinds.

The street facade is appropriately designed with greater dignity and severity than the garden front, which faces a deep lawn flanked by flower gardens. As the rear of the house, rather than the front, is intended for the use of the family, a fine two-story porch is here introduced to further express the Colonial character of the design. By screening in the upper part of this porch, outdoor sleeping quarters are provided. The plan of the first floor shows a balanced arrangement of living and dining rooms divided by a spacious hall extending through the house. Off the dining room is located a breakfast porch, similar in design and width to the living porch at the opposite end of the house. A large kitchen, store closet and service porch occupy the first floor of the ell. On the second floor two guest rooms, an owner's room of unusual size, two masters' baths, and two servants' rooms and bath are located. The plans are in excellent agreement with the exterior.



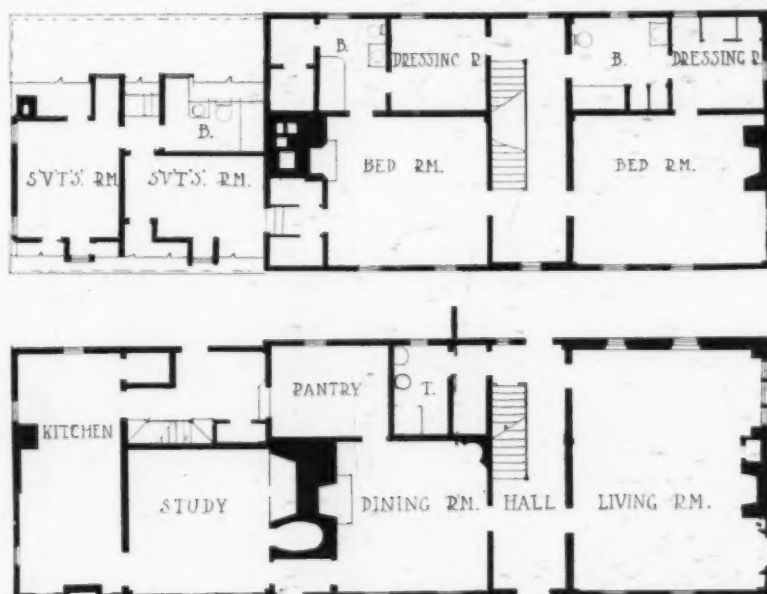
Street Entrance



HOUSE OF WILLIAM H. DIXON, ESQ., ST. JAMES, N. Y.  
PEABODY, WILSON & BROWN, ARCHITECTS

ALTHOUGH larger and more generously planned than most of the houses shown in this group of small buildings, this country house overlooking Long Island Sound possesses the same delightful quaintness and charming simplicity found in the smaller examples of modern Colonial farm houses. The use of extra large shingles, laid about 12 inches

to the weather, gives an interesting character to the white painted walls. Entrance doors and windows, which are important features in a farm house design, are here detailed, proportioned, and spaced with obvious care and study. The entrance porches as well as the living porch show much appreciation of early American precedent, as do also the dormer windows.



SCALE OF FEET  
0 5 10 20  
First and Second Floor Plans





Garden Front



One End of Living Room

## FORUM SPECIFICATION AND DATA SHEET—201

House of William H. Dixon, Esq., St. James, N. Y.;—Peabody, Wilson &amp; Brown, Architects

## OUTLINE SPECIFICATIONS

## GENERAL TYPE OF CONSTRUCTION:

Wood frame.

## EXTERIOR MATERIALS:

Shingles.

## ROOF:

Shingles.

## WINDOWS:

Double-hung—of wood.

## FLOORS:

Maple.

## HEATING:

Low-pressure steam; one-pipe system.

## INTERIOR WALL FINISH:

Living room, hand-patted plaster and oak ceiling beams; study or library, white pine book cases, hand-patted plaster, oak ceiling beams; dining room, wood paneling to dado.

## APPROXIMATE CUBIC FOOTAGE:

52,780.



Living Room Fireplace



ENTRANCE, COTTAGE ON ESTATE OF GERHARD M. DAHL, ESQ., SMITHTOWN, N. Y.  
PEABODY, WILSON & BROWN, ARCHITECTS

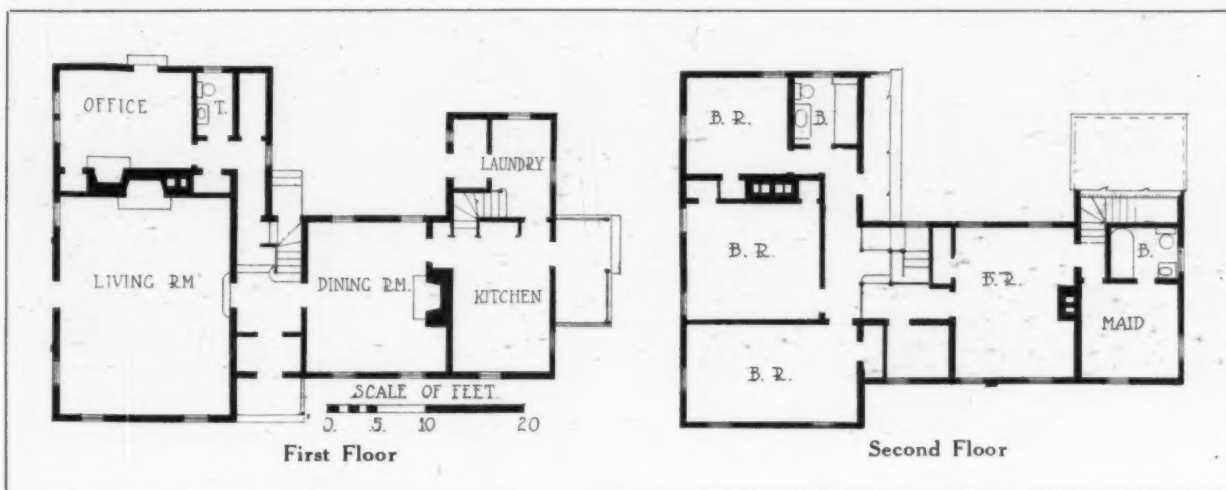




COTTAGE ON ESTATE OF GERHARD M. DAHL, ESQ., SMITHTOWN, N. Y.  
PEABODY, WILSON & BROWN, ARCHITECTS

AS much care and pains are taken today in the designing of the various farm buildings as with the mansion house itself. Where 25 years ago the man in charge of a country estate was usually designated the "farmer," today he is called the "superintendent," and he is usually a graduate of some well known school of agriculture. This particular superintendent's cottage possesses a great deal of simple charm and a homelike quality not always easy to obtain. The house, which is rather larger than the usual abode of a resident farmer or superintendent, is

refreshingly different in plan from that of the usual small country house. It is divided by a center entrance hall which connects the dining room and service wing with the living room and office in the principal part of the house. Two steps down from the floor level of the dining room make possible a higher ceiling in the living room, which is an advantage in so large a room. The office, which is located at one corner of this floor, is well-supplied with closets for supplies and coats, and has an easily accessible lavatory. An outside door leads from this office directly



## FORUM SPECIFICATION AND DATA SHEET—202

Cottage on Estate of Gerhard M. Dahl, Smithtown, N. Y.; Peabody, Wilson & Brown, Architects

## OUTLINE SPECIFICATIONS

## GENERAL TYPE OF CONSTRUCTION:

Wood frame.

## EXTERIOR MATERIALS:

Clapboards.

## ROOF:

Wood shingles.

## WINDOWS:

Double-hung, of wood.

## FLOORS:

Living room of oak; rest of maple.

## HEATING:

Steam heat.

## INTERIOR MILLWORK:

Painted trim.

## INTERIOR WALL FINISH:

Plaster.

## APPROXIMATE CUBIC FOOTAGE:

35,000.

onto one of the main driveways of the estate. Although a so-called "story-and-a-half" house, the second story walls are sufficiently high before they meet the sloping roof line to provide excellent wall

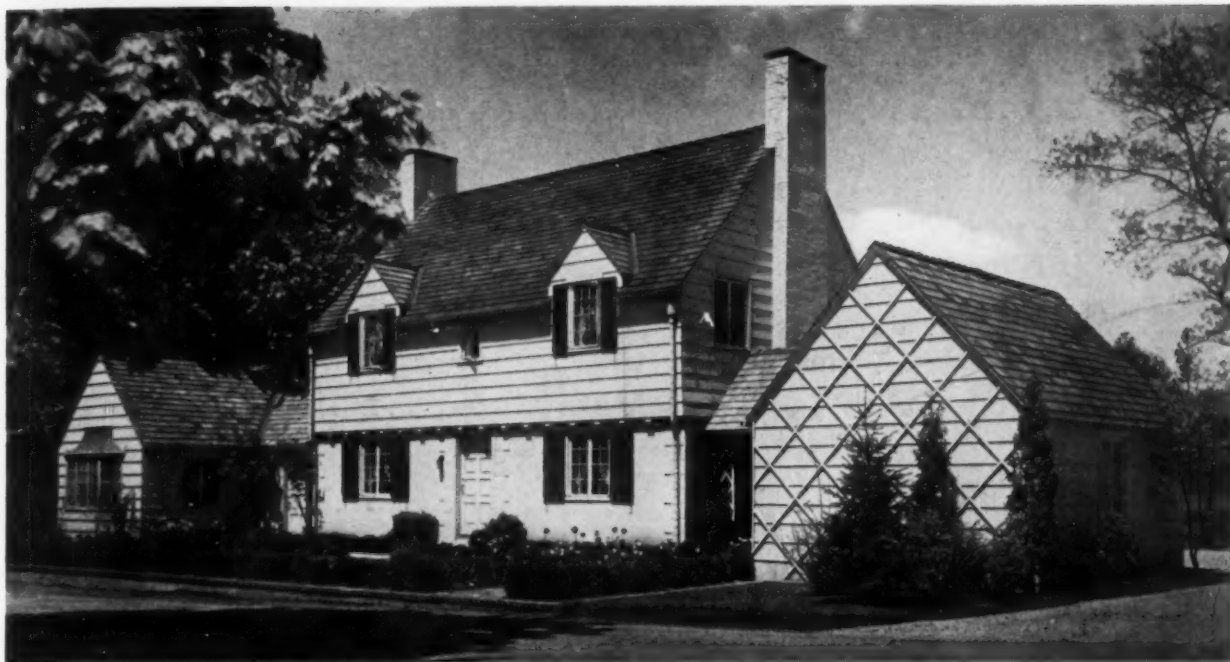
space and head-room in the second story. Four masters' bedrooms, two baths, and a maid's room occupy the second floor, making the house convenient and comfortable for the use of the superintendent.



Entrance Gate



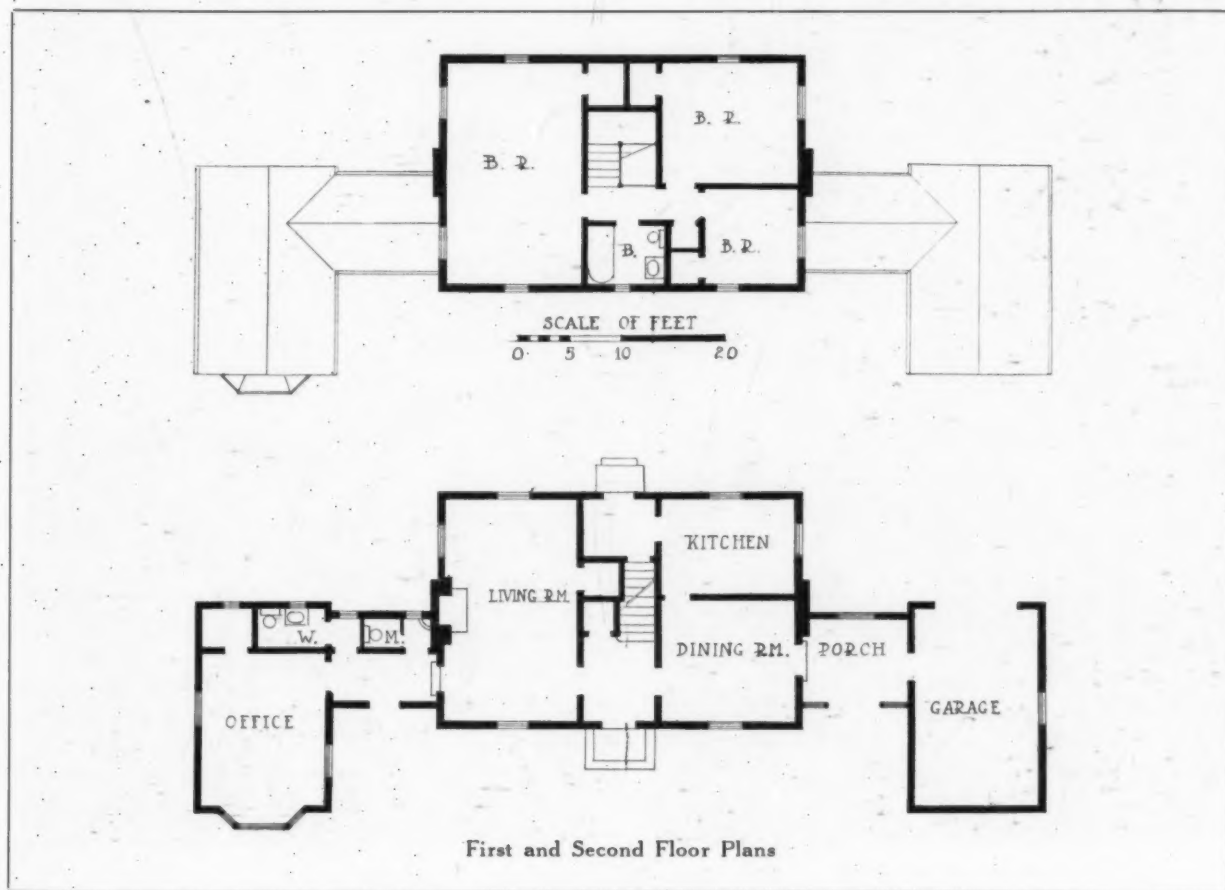
Service Entrance



LODGE "HARBOR ACRES," PORT WASHINGTON, N. Y.  
AYMAR EMBURY II, ARCHITECT

THERE is a suggestion of the early Connecticut farm house in this attractive lodge. The use of wide matched siding for the first story, relieved by wood quoins at the entrance door and at the corners, provides a pleasant contrast with the white painted

shingles of the second story. The high pitched roof, broken by two low dormer windows on the front and balanced by the tall end chimneys, makes a delightful composition. Importance is given to the main house by the addition of two low wings. One





## FORUM SPECIFICATION AND DATA SHEET—203

Lodge, "Harbor Acres," Port Washington, N. Y.; Aymar Embury II, Architect

## OUTLINE SPECIFICATIONS

## GENERAL TYPE OF CONSTRUCTION:

Frame.

## EXTERIOR MATERIALS:

Shingles.

## ROOF:

Shingles.

## WINDOWS:

Steel casements.

## FLOORS:

Oak.

## HEATING:

Steam.

## INTERIOR MILLWORK:

Special detail trim; base, chair rail and cornices in living room, dining room and office.

## INTERIOR WALL FINISH:

Sand finish.

## INTERIOR DECORATIVE TREATMENT:

Flat oil paint.

of these wings contains the office of the overseer or superintendent, and the other a one-car garage. Attention is called to the scale and detail of the bay window of the office building, which is both a utilitarian and a decorative feature. The planting about this house is unusually well done, as is also the diagonal latticed treatment of the front end of the garage. The plan of the first floor shows a large living room occupying one end and a dining room

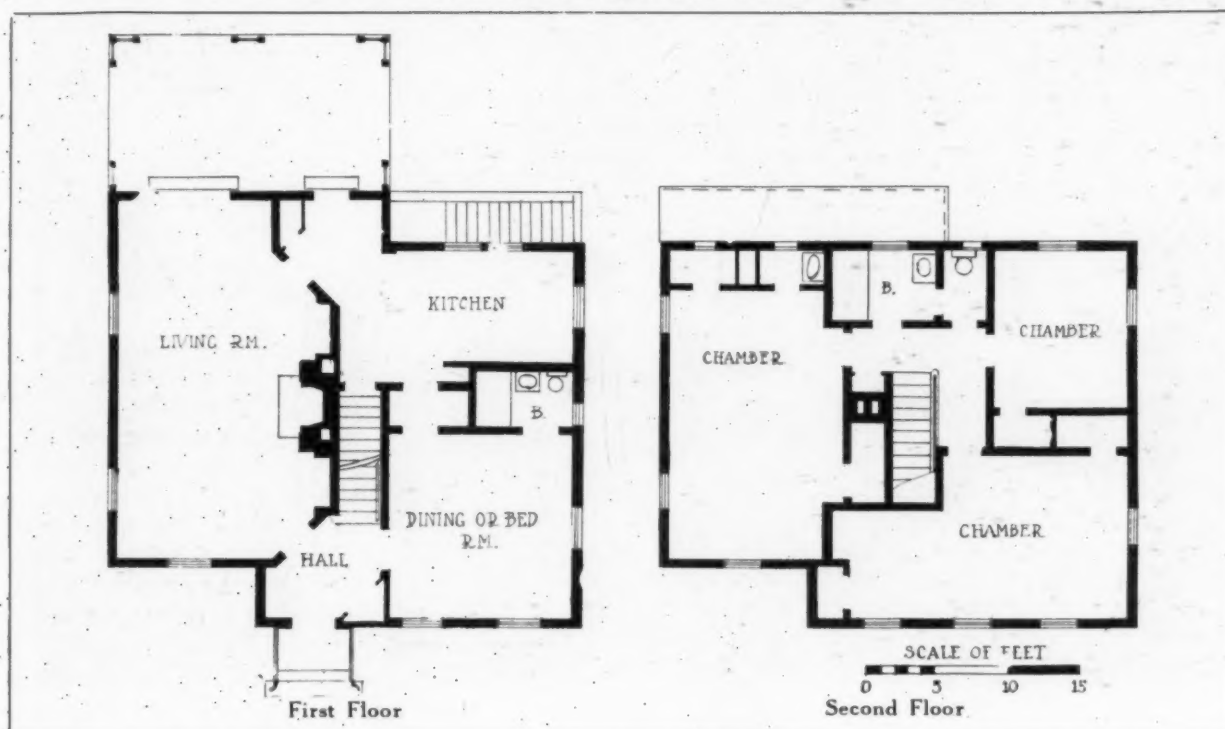
and kitchen the other. Closets and stairways to the second floor and cellar, as well as a rear hall opening off the kitchen, occupy the center of this floor. From the living room a passageway or entry connects the office wing with the main house and provides an outside entrance to the office. The second floor of the main part of the structure has three bedrooms, a bathroom, and four large closets. This is an ideal small house plan, providing maximum area.



View from Entrance Gates



HOUSE OF A. V. BARTO, ESQ., BRONXVILLE, N. Y.  
GEORGE ROGER THOMPSON, ARCHITECT



## FORUM SPECIFICATION AND DATA SHEET—204

House of A. V. Barto, Esq., Bronxville, N. Y.; George Roger Thompson, Architect

## OUTLINE SPECIFICATIONS

## GENERAL TYPE OF CONSTRUCTION:

Frame.

## EXTERIOR MATERIALS:

Clapboards.

## ROOF:

Shingles.

## WINDOWS:

Double-hung; white pine.

## FLOORS:

Oak.

## HEATING:

Hot air.

## ELECTRICAL EQUIPMENT:

Dishwasher.

## INTERIOR MILLWORK:

White pine.

## INTERIOR WALL FINISH:

Hard white finished plaster.

## INTERIOR DECORATIVE TREATMENT:

Painted walls; paper in hall.

## APPROXIMATE CUBIC FOOTAGE:

29,000.

## COST PER CUBIC FOOT:

50 cents.

## DATE OF COMPLETION:

November 1, 1924.



Main Entrance

IT is always interesting as well as pleasant to find some variation in the prevailing style of modern Colonial farm houses. In this house at Bronxville the architect has succeeded in catching the spirit of the period from 1830 to 1850, sometimes termed, because of some of its more pretentious examples of architecture, that of the "Greek Revival." The detail of the entrance door, however, is reminiscent of Colonial work in New England, as are also the quoins at the corners of the building. The suggestion of the Greek Revival is found in the pediment treatment of the roof gable as well as in the proportions of the windows. It is rather unfortunate that the plan was such as to make it impossible to center the front door directly under the window above it. Absolute balance and symmetry invariably characterize designs in the Greek Revival style, but in this instance the freedom exhibited in both plan and elevation is rather welcome. There certainly is an atmosphere of cheerful hospitality about this house which would prompt one to stop and look at it a second time. It represents an architectural type which might well be more used.



# INTERIOR ARCHITECTURE

## Salon, Hotel de Chaulnes, Paris

By C. HAMILTON PRESTON

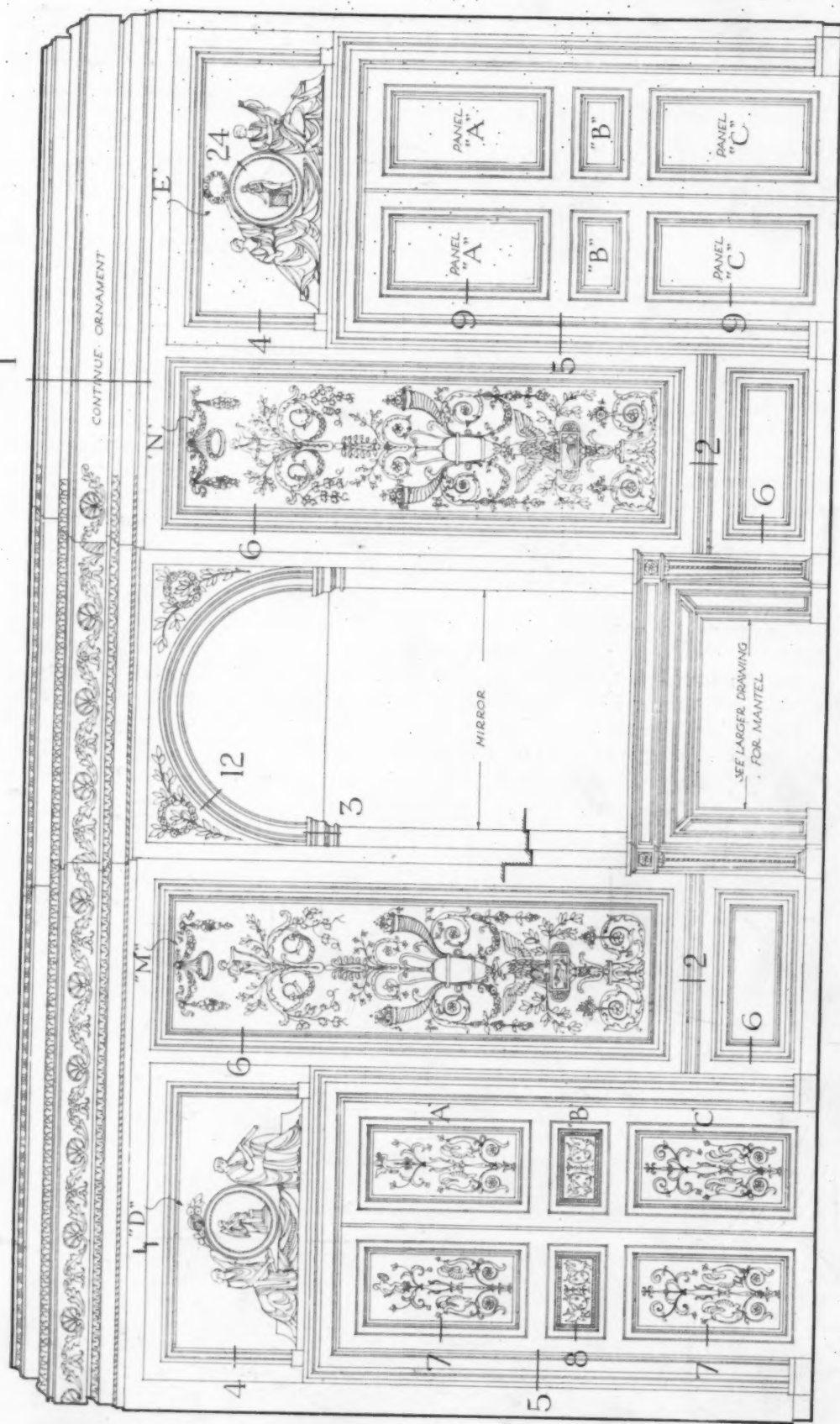
**A** GAIN the subject of this series is one of the remarkable rooms to be found in the Hotel de Chaulnes, Place de Vosges, Paris. This room, however, differs completely from the others and is by far the most elaborate. Either from a photograph or from a drawing one might consider this interior over-elaborate, but such is not the case in actuality. The proportion and scale of the room as well as the disposition and delicacy of the ornament combine to give an effect verging on restraint. The keynote of the design is given by the large and well proportioned arched mirror over the mantel, repeated on the two walls adjoining, while the opposite wall is exactly balanced by a mirrored door of the same proportions, deeply recessed. On the sides of these arched mirrors there occur exquisitely designed and executed panels in plaster after the manner of Cauvet; in fact, it is thought that these may be the work of the master himself. Carvings of rare delicacy occur in all the panels of the doors, the carving, thus adding a certain unity to the room.

The work in this room seems to be of two periods.

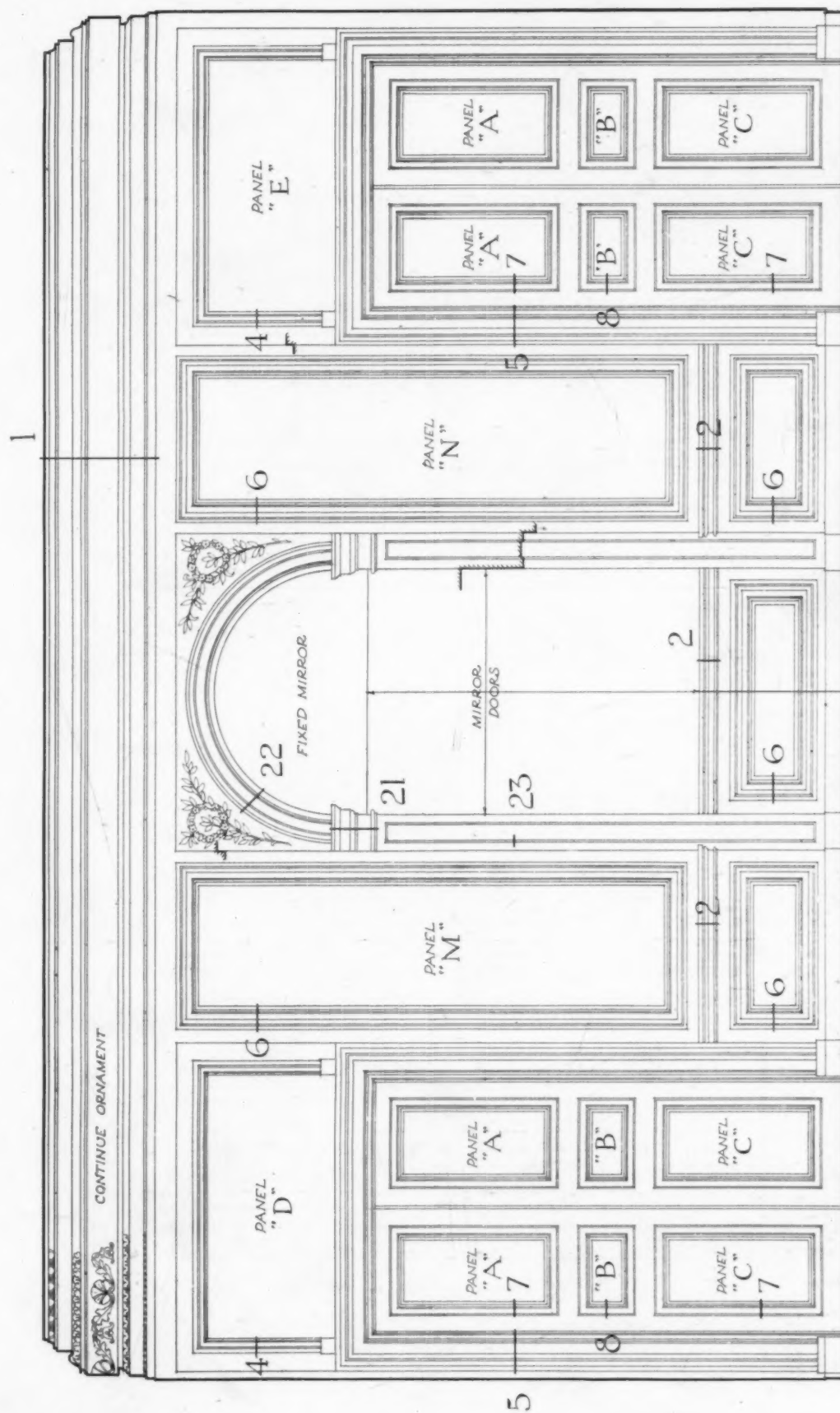
Architraves, cornice and panel moulds are bold and heavy and evidently of the Louis XIV period, while all the ornament in plaster is delicate and distinctly Louis XVI in feeling. The centerpiece in the ceiling, from which the chandelier is suspended, is of the rarest beauty and was probably an addition during the latter part of the Louis XVI period, just before the style merged into that of the Directoire. The mantel, executed in white marble, is unusually good in design and well scaled to the room. The plaster and the woodwork are oyster-shell white. At the present time this room has been decorated in a most perfect manner, so that its architectural values have been greatly enhanced. A beautiful crystal chandelier hangs from the ceiling. Appliques of great beauty are properly placed on the walls, and the hangings, furniture and upholsterings are of the finest the period affords. All this is reflected many times over in the four huge mirrors, and this together with the beauty of the sculptured panels gives one an unforgettable picture of one of the most charming rooms of this period to be found in all Paris.



Salon, Hotel de Chaulnes, Paris



ELEVATION A~A  
 SALON  
 HOTEL DE CHAULNES  
 PARIS  
 Scale  $\frac{3}{8}$ " = 1 Foot



ELEVATION C~C

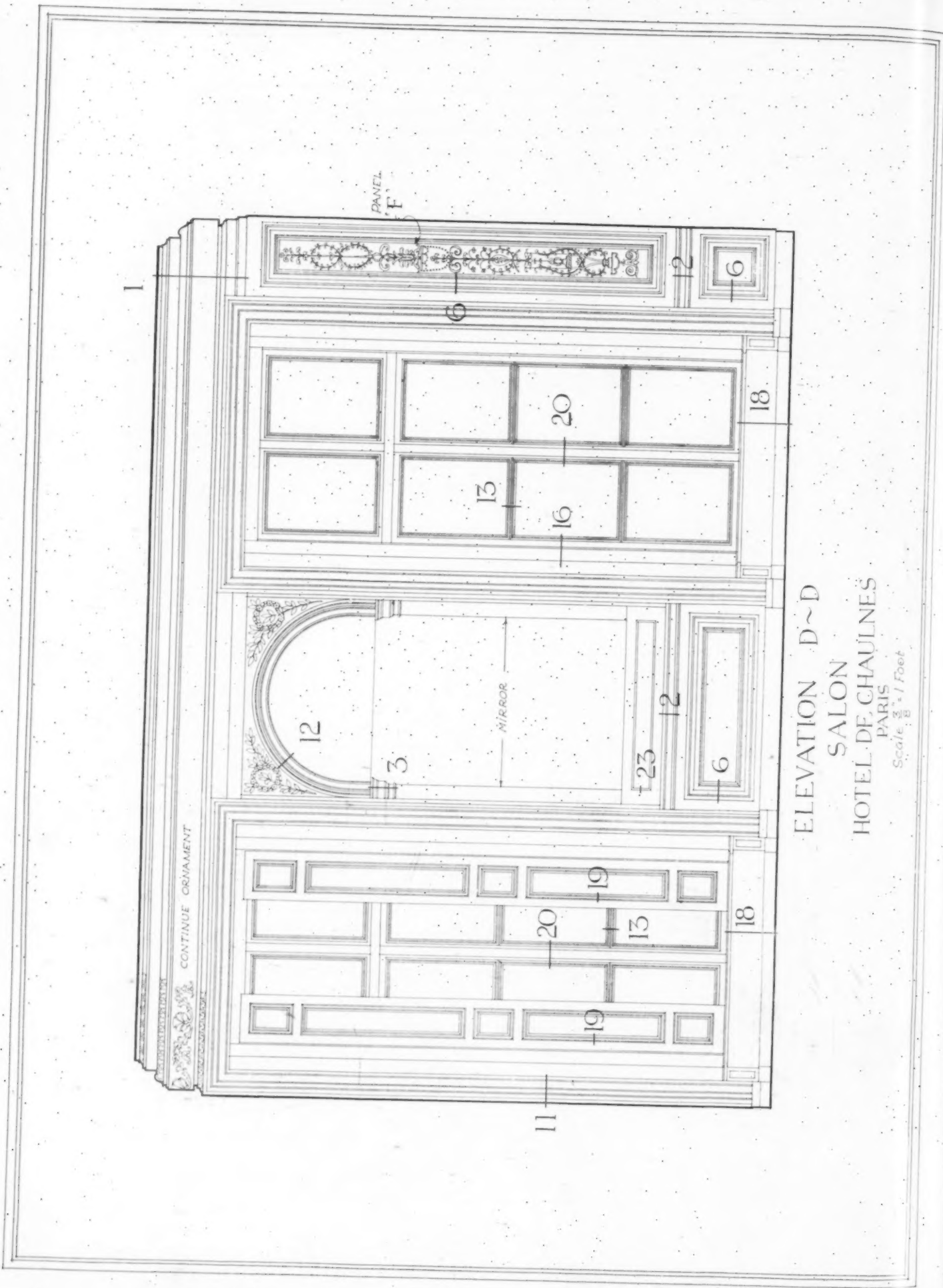
SALON

HOTEL DE CHAULNES

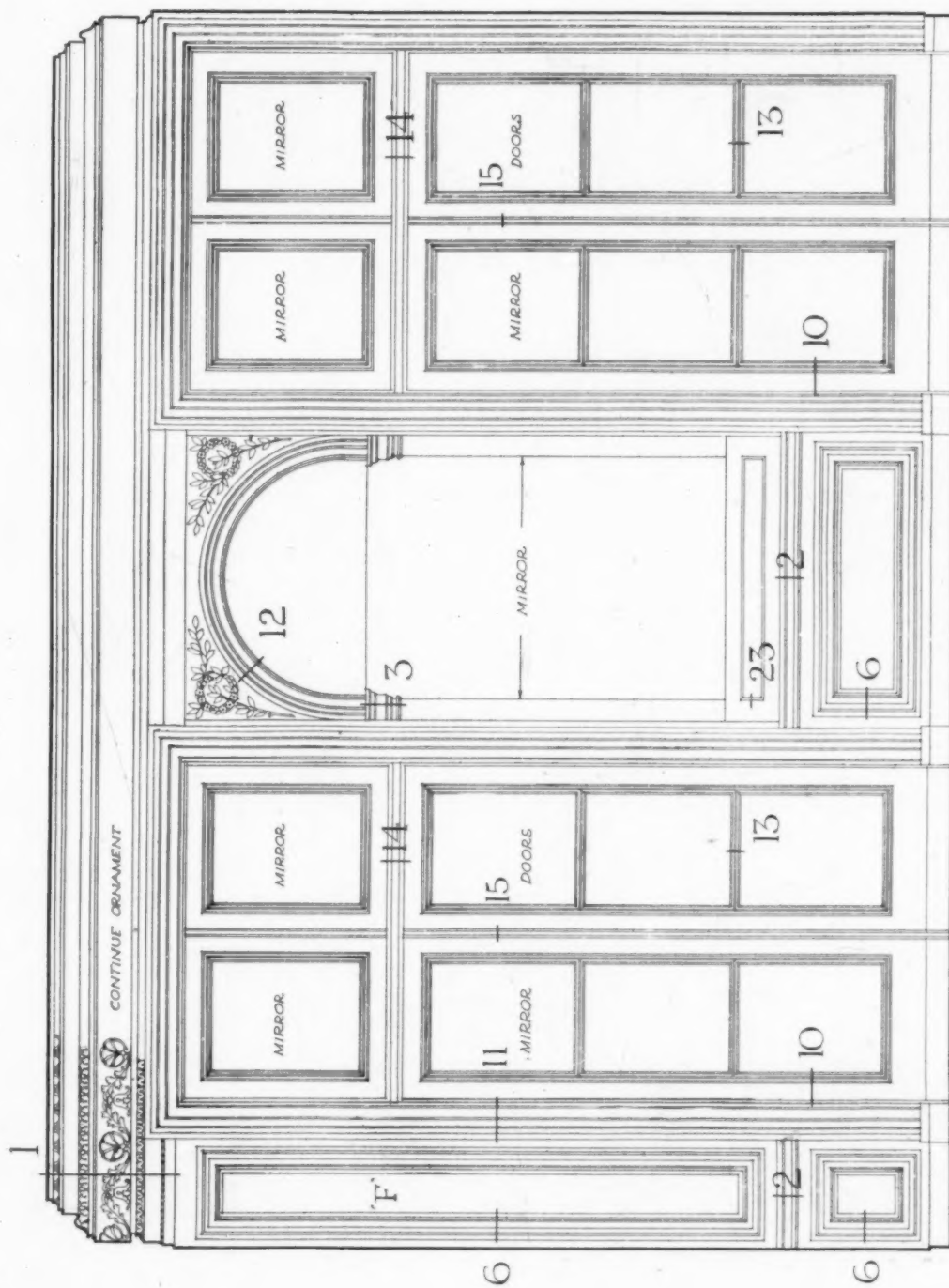
PARIS

Scale  $\frac{3}{8}$ " = 1 Foot





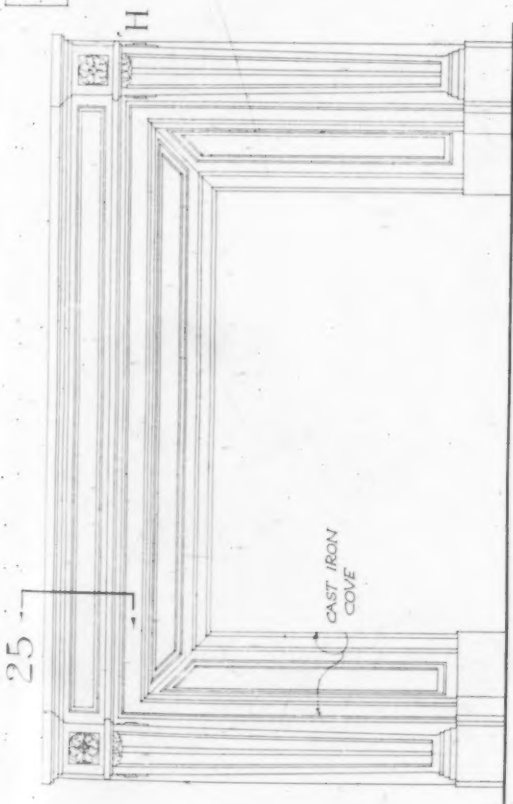
ELEVATION D-D  
 SALON  
 HOTEL DE CHAULNES  
 PARIS  
 Scale  $\frac{3}{8}$ " = 1 Foot



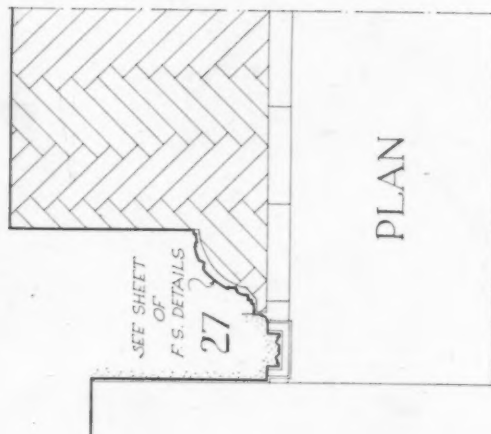
ELEVATION B~B  
SALON  
HOTEL DE CHAULNES  
PARIS  
Scale  $\frac{3}{8}$ " = 1 Foot



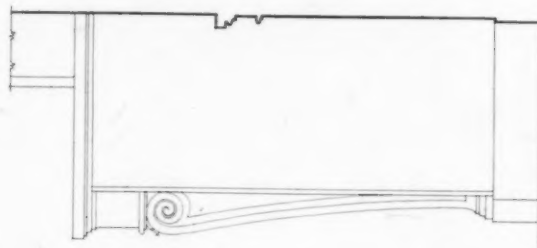




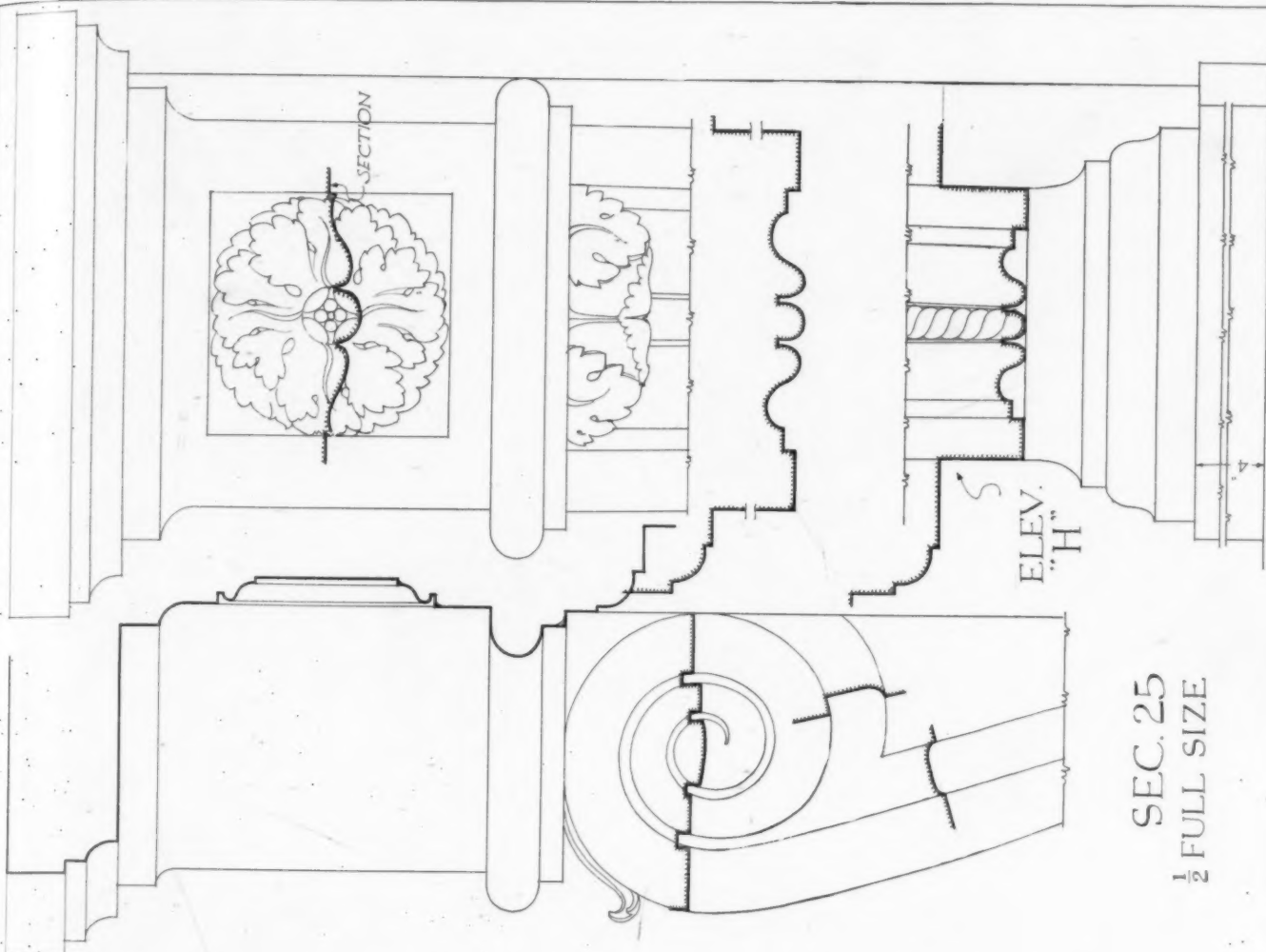
ELEVATION OF MANTEL



PLAN



SIDE  
Scale  $\frac{3}{4}$ " = 1 Foot



SEC. 25  
 $\frac{1}{2}$  FULL SIZE

SALON  
HOTEL DE CHAULNES  
PARIS



SALON, HOTEL DE CHAULNES, PARIS